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ABSTRACT

This guide provides lessons that enable students to learn how important it is for each of us to take care of the environment by minimizing the problems caused by too much trash. In the 10 lessons included here, students and their families learn how they can be part of the solution by practicing source reduction and by reusing, recycling, and composting. Lessons include science, language arts, social science, mathematics, and art activities. They provide many opportunities for problem solving, critical thinking, creative expression, and understanding community resources. Each lesson contains a section with tips for integrating across the curriculum and reproducible worksheets. Spanish versions of the vocabulary list and the parent letter are also provided. The activities enable an exploration of the nature of trash and waste, what it means to throw away, smart shopping, reusing, recycling, composting, and teaming for recycling. (DDR)

TEACHER GUIDE

FOR THE RECYCLE TEAM™ EDUCATION PROGRAM

WELCOME TO THE RECYCLE TEAM™

The RECYCLE TEAM™ was developed by the Southwest Regional Laboratory (SWRL).

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THE RECYCLE TEAM™

WHAT DO THE STUDENTS LEARN?

In the Recycle Team lessons, students learn how important it is for each of us to take care of our environment. An essential part of this care is to minimize the problems created by too much trash. In ten entertaining lessons, students and their families learn how they can be part of the solution, by practicing source reduction and by reusing, recycling, and composting.

Lessons include science, language arts, social science, mathematics, and art activities. In addition, lesson activities provide many opportunities for problem-solving, critical thinking, creative expression, and understanding community resources. An "integration across the curriculum" section accompanies each lesson. The information in this section can be very helpful in integrating a variety of subject matter areas into a single thematic unit. All of the lessons include excellent opportunities for small group activities in cooperative learning groups.

HOW MUCH TIME DOES IT TAKE?

Each of the ten lessons can be completed in less than 30 minutes. You may want to allow more or less time with some lessons, depending on student interest and local priorities.

WHAT MATERIALS ARE NEEDED?

All classroom materials are provided except for the following:

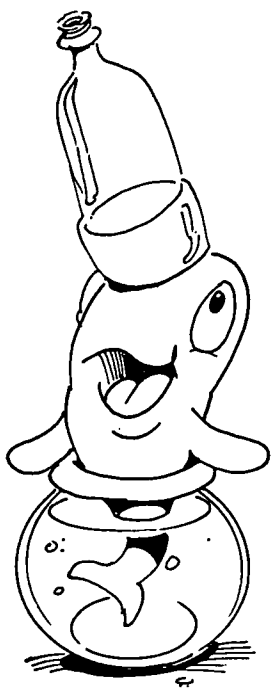
- Lesson 2 ball of yarn or twine; plastic trash bag (optional activity)
- Lesson 4 one large and several small bags of potato chips (optional activity)
- Lesson 6 items made from each of the following: glass, plastic, aluminum, and paper
- Lesson 7 scissors and paste or tape
- Lesson 8 local telephone advertising pages and local city map
- Lesson 9 rinsed, 1-gallon plastic milk container, and a small amount of garden soil, yard waste, and kitchen scraps

WHAT ABOUT REPRODUCING PAGES FROM THE TEACHER GUIDE?

Several pages in this Guide are designed to be reproduced and distributed to the students.

- Student Booklet pages in Appendix A: Reproduce these pages if you decide not to have the students write in their booklets.
- Spanish Vocabulary and Parent Letter in Appendix B: Reproduce these pages for students and parents who do not read English.

LESSON SEQUENCE



LESSON ONE: WHAT IS TRASH?

PURPOSE

In this lesson, students are introduced to the Recycle Team characters and the problems they are having with trash. Students learn the concept of trash and learn to find value in many of the things people throw away.

BACKGROUND INFORMATION

Our nation is facing a solid waste crisis. Every year, the amount of waste increases while our options for disposing of it decrease. The new buzzwords for the 90s are Reduce-Reuse-Recycle. There is also a fourth, equally important concept: Rethink. We need to stop and think about what we're throwing away and if what we are throwing away really is trash. We cannot continue to believe that our trash just goes away on collection day. Everyone needs to make a conscious effort to become part of the solution to the waste crisis. A single person can make a big difference to a very important problem.

INTEGRATION ACROSS THE CURRICULUM

The activities in this lesson help students develop critical thinking and analysis skills by examining the waste crisis and discussing the concept of finding items of value in the trash. Additional skills include:

- Language Arts: Listening to a story, comprehending the story, speaking, reading a newspaper, vocabulary development.
- Mathematics: Collecting and displaying survey data and results.
- Science: Organizing and classifying information, reporting results.
- Social Science: Participating in cooperative learning groups.

MATERIALS YOU WILL NEED

- Student Booklets
- Parent Leaflets

VOCABULARY

Garbage: Any material considered worthless, unnecessary, or offensive. Spoiled or waste food that is thrown out.

Trash: Dry material considered worthless, unnecessary, or offensive that is usually thrown away. Not food waste or ashes. The term is often used interchangeably with the word "garbage."

Waste: Material that has been discarded because it has worn out, is used up, or is no longer needed by you. Packaging, newspapers, used writing paper, and broken appliances are often classified as waste.

ACTIVITY - The Name Game

Ask students to name other words they use to describe trash or garbage (examples: waste, solid waste, refuse, discards, rejects, throw-aways, junk, scraps, debris, rubbish, rummage, rubble). Students may use different words depending on where they live or where they grew up.

Explain that there are different types of trash: household, school, or office trash. Discuss types of items found in the trash at home and in the school trash.

ACTIVITY - Buried Treasure

Distribute student booklets and ask students to turn to Pages 2 and 3. Tell them they are going to hear a story about the Recycle Team. Read the "Buried Treasure" story aloud and ask the students to follow along, using the numbered pictures in their booklets. (You will find the story at the end of this lesson.)

You may want to have students play the roles of the Recycle Team characters for the story's "Recycle Song." This choral reading exercise can be enhanced by having students wear the animal masks provided in Appendix A.

ACTIVITY - Trash Survey

Divide the students into groups. Ask students to take a few minutes to look for "trash" in their desks, backpacks, notebooks, and "cubbies." Students should place items on their desks.

After everyone has individually found all of their own "trash," ask each group to decide whether the items on the desks, destined for the trash can, are in fact "trash." Each group should select a Recorder who will list the items and record, by vote, the number of people in the group who agreed that the item was trash and the number who thought the item still had value and was not trash.

Ask each Recorder to report what the group decided and why. For items that the group could not agree upon, ask students why they did not think the items were trash. Do these items have any value? Can they be made valuable?

ACTIVITY - One Duck's Trash Is Another Bear's Treasure

Ask the students the meaning of the phrase "one person's trash is another person's treasure." Ask if anyone has been to a garage sale, flea market, rummage sale, second-hand shop, or to a used goods store such as Goodwill or Salvation Army. Ask what items they purchased there. Were they new or used? Ask what other items are valuable because they are old. (Examples: antique furniture and cars, coins and stamps, baseball cards.)

DISTRIBUTE PARENT LEAFLETS

Distribute and discuss the parent leaflets. Emphasize that students should take the leaflet home and read it with their families. The leaflet describes an effective means of reducing waste: composting. Although most adults know something about recycling, reusing, and smart shopping strategies, few know about the value of composting and how to go about it. Students will be introduced to composting in Lesson Nine.

A black-line master of a Spanish-language parent leaflet is provided in Appendix B.

OPTIONAL ACTIVITIES

At the end of the day, ask the custodian to combine the contents of several classes' wastebaskets that would ordinarily be thrown out and leave it all in your classroom. Don't tell the class that all the trash will end up in their classroom (and that their class will represent a landfill). If possible, put the trash in clear plastic so students can see the contents. This is in preparation for Lesson Three, which will help students understand where the trash goes. **Note:** If you don't want a "landfill" growing in the classroom, the Lesson Three activity can include an examination of a trash dumpster on the school grounds.

EVALUATION CHECKLIST

Are the students able to...

- define "trash"?
- describe one or more items that they (or their family) have thrown away that may have value?

STORY FOR LESSON ONE: BURIED TREASURE!

Picture #1

One summer evening, Reggie Raccoon, better known as the Dumpmeister, had finished tidying up all of his treasure and was just settling down to read about his favorite detective, Sherlock Jones, when he was jarred out of his chair by a knock on the door that he hoped was NOT a Girl Scout selling cookies.

Picture #2

Adjusting his eyeglass and standing on tiptoe to peek out, he saw a most extraordinary sight that left him nearly speechless.

There before him stood an extremely rude-looking duck, who seemed to be the leader of a sorry-looking band of animals.

When the duck asked his name, the Dumpmeister responded, "I am Reginald Chumley Davenport, and this is my home here at the landfill between the twin cities of Flotsam and Jetsam. However, you may call me the Dumpmeister."

"Yeah...well...swell. What the heck is a DumpMOUSTER?" asked the duck impatiently.

"That's DumpMEISTER," Reggie corrected him. "A treasurer of trash, a garbage gourmet—in short, I am the caretaker here at Flotsam's landfill, which I find to be full of unbelievable treasures. And together with my cat, Falstaff, I'm making my DREAM of a trash museum come true."

"That's nice, but we have our own trash NIGHTMARE going on out here," the duck replied. "We've come a long way from the forest trying to find a place for all this stuff!"

Picture #3

As he spoke, he gestured to a pink convertible driven by a beaver called Sammy Slaptail. The car, with Sammy at the wheel, was piled high with all kinds of wonderful cast-off objects.

As the Dumpmeister pushed past the duck to get a closer look, a rather large but gentle-looking bear introduced himself as Benny.

Picture #4

"Wherever did you find all this great stuff, Benny?" the Dumpmeister asked. "This isn't trash. By the time I sort through all of this, there will be room for all of you in the car, and my trash museum will be wonderfully enriched. Stand back and let the Meister play! First, pull out all these valuable containers. Oh—beautiful bottles of glorious glass and priceless pieces of plastic—and my favorites, cans of marvelous man-made metal. It's uncanny that people consider these things trash!"

"OK...the pile IS getting a little smaller," the duck agreed, "but the car is still overflowing with trash."

"I'm just getting started," the Dumpmeister replied, pulling several perfectly good comic books out of the pile.

"This IS buried treasure!" exclaimed the beaver. "These old Spiderman comics are worth lots of money. And here's one about a bad-tempered duck. There must be a lot of THOSE around."

The Dumpmeister could see that his excitement was spreading to the others as, one by one, the team joined him in pulling other valuable items from the pile.

"Here are some pictures that someone named Nancy drew," said the bear. "And a three-wheeled skateboard!"

"It would take some hardy boys to ride it that way," said the beaver.

CONTINUED...

Picture #5

The Dumpmeister could hardly believe what he saw next. "Someone even threw out this fine fishy fellow, bowl and all. He'll be fantastic for my friend, Falstaff!" he said.

"No, you don't, Mr. Meister!" the duck growled. "That's our friend Gilda, who can take care of HERSELF, and SHE's not going to get catnipped as long as Danny Duck is around."

"Don't get your feathers in a flurry, Danny," the fish warned. "Besides, the cat looks like he's more in the mood for roast duck than fried fish!"

Picture #6

The bear interrupted, saying, "Boy, you sure are right about people throwing away perfectly good stuff. Look at this brand new pair of shoes someone threw away." As he spoke, he pulled from the pile a pair of shiny loafers with a very startled young man inside them.

"We can reuse those shoes and clothes," the Dumpmeister said, "but HE will have to go into the compost pile with the grass clippings."

"STOP—PUT ME DOWN!" the young man commanded the bear. "I'm Scoop Story, a reporter from DUMP-TV. I came out here to do a report on the Dumpmeister's trash museum. I was hiding behind that pink car when the trash pile fell on me."

"Serves you right for spying on us," snarled the duck.

"Wait a minute," pleaded Gilda. "This guy can help us! He can take our trash problem AND SOLUTIONS to the public!"

"YES, we can have our own TV show on PBS!" the Dumpmeister exclaimed." A Legend of Litter, A Recital of Refuse, A Chronicle of..."

"WILL YOU STOP THAT?!" snapped the duck, ruffling his feathers.

"I think Gilda means that what we've learned here is newsworthy," suggested the beaver.

"It IS newsworthy," agreed Scoop. "Come to the studio with me NOW! We can get you on the five o'clock news. You guys will need a catchy name, though..."

"I'VE GOT IT!" the Dumpmeister volunteered. "Protectors of the Planet...Terminators of Trash...Watchdogs of Waste..."

"How about something simple, like The Recycle Team?" said the practical little Gilda.

"I LIKE THAT," agreed Scoop. "It's simple and direct and easy for me to spell."

Picture #7

In a flash, they all piled into Sammy's now empty car and set their course for the DUMP studios, halfway between Flotsam and Jetsam. Sammy got everyone there just in time for Scoop to introduce them on TV.

Picture #8

"Today we have some special guests here to tell us to stop sweeping our dirt under Mother Nature's carpet. These experts, who call themselves the Recycle Team, have been down in the dumps, had troubles over trash, and have had litters of their own. OK, team, let's hear your message!"

Picture #9

THE RECYCLE SONG
As sung by the Recycle Team

Dumpmeister:

We've got a problem, boys and girls, that speaks of doom and gloom!
We're throwin' so much stuff away, we're running out of room.
Now, just because you threw it out, it hasn't disappeared—
It's sitting in the landfill for a couple hundred years!

Fish:

Now cans are made of metal, and bottles made of glass,
And plastic jugs are made of stuff that's being used up fast.
All of Nature's gifts, my friends, like time which passes on,
Cannot be replaced, you know; once they're gone, THEY'RE GONE!

Chorus (sung by all):

So have a clue, and help the earth! Now don't you be a chump!
If you know it can be used again, don't send it to the dump!

Duck:

Now take this glass container, once full of Perrier:
Recycle it so it can live to see another day!
Just empty it and rinse it out and put in the bin.
They'll break it up and melt it down and make it new again.

Beaver:

And here's a plastic bottle—it's a miracle of man.
There's millions in the landfills from Detroit to Hindustan.
So wash 'em and recycle 'em into something new:
A comb, a pot, a plastic bird, a styrofoam canoe.

Bear:

And now a can of soda pop, aluminum—you bet!
To throw it in a landfill—how stupid can you get?!
Now this should be recycled—a brand new can comes out.
To save our precious resources—that's what it's ALL about.

Entire Group:

Well, now you know it's no big deal to beat this bogeyman,
If everyone does something to recycle what they can.
So have a clue, and help the earth! Now don't you be a chump!
If you know it can be used again, don't send it to the dump!

The rest is history. The audience response was overwhelming. Phones at the studio rang off the hook. Citizens were excited about solving the trash problem and wanted to know how to help.

And the Team became famous making music videos for ETV (Environmental Television).

Picture #10

The team used the money they made on TV to fix up and reuse Sammy's pink convertible, calling it the ECOmobile. The cities of Flotsam and Jetsam gave them a ticker tape parade and considered them homegrown heroes.

Reggie Raccoon, the Dumpmeister, and his cat, Falstaff, retired again to their trash museum. They promised to write the story of their new friends—the bear, the beaver, the fish and that rowdy duck—and how they become famous as the Recycle Team.

LESSON TWO: WHAT A WASTE?

PURPOSE

In this lesson, students learn what happens when we throw away trash: the effects trash disposal has on the environment and the types of problems it can cause. They learn that problems caused by trash disposal can create additional problems.

BACKGROUND INFORMATION

All living things on Earth depend on each other. What affects one thing affects others, either directly or indirectly. If, for example, pesticides and chemicals are commonly sprayed on crops to kill insects, this could directly harm the beneficial insects that also pollinate the crops. Later, after farmers irrigate the crops, the pesticide and chemical residue might run off into nearby streams, which could pollute the water, which in turn might cause the fish that live there to die. The diminished fish supply may affect other animals that depend on the fish for their own survival. These are *indirect* effects.

INTEGRATION ACROSS THE CURRICULUM

The activities in this lesson help students develop critical thinking and analysis skills by examining the impacts and consequences of trash disposal. Additional skills include:

- Language Arts: Listening to a story, describing feelings about characters and problem-solving strategies, vocabulary development.
- Mathematics: Making reasonable conjectures.
- Science: Discussing environmental problems, identifying cause and effect through a cooperative learning activity.
- Social Science: Identifying problems and issues.

MATERIALS YOU WILL NEED

- Student Booklets
- Ball of yarn or twine

VOCABULARY

Environment: Our surroundings. Everything around us, such as water, air, weather, people, plants, and soil.

Environmental Impact: The effects that things have on the environment. All human activities cause some change in our environment.

ACTIVITY - The Early Days

Remind students that in the last lesson, they learned that Danny Duck, Benny Bear, Gilda Fish, and Sammy Slaptail had problems with trash. As you read this next story, students will see how trash affects the characters' homes. In fact, this is what brought the Recycle Team together in the first place! (You will find the story at the end of this lesson.)

ACTIVITY - Problems From Trash

Discuss several examples of cause and effect. For example, dropping a book on the floor (the cause) creates a noise (an effect).

Have the students look at the illustrations on Page 4 of the student booklet and ask someone to point out the illustration of one of the "causes." Then ask the students to point out the corresponding "effect." There are several possible effects for each cause illustration. The family picnic can create litter, making Gilda green around the gills; building more houses results in fewer trees and less building material for Sammy Slaptail; and the discarded plastic from a six-pack of aluminum cans may cause a problem for Danny Duck.

Ask students to describe other "cause and effect" situations in which something people do causes harm to the environment.

ACTIVITY - The Domino Effect

Throwing away trash can cause problems that may not be obvious. Discuss the types of problems encountered by the Recycle Team in the story and how each problem can cause a chain of unpleasant effects. Here are some examples:

- Gilda's problem: litter in the stream. Effects: Fish eat the litter, people eat fish, people and fish become ill.
- Danny's problem: litter on the ground. Effects: Animals get entangled in litter such as plastic six-pack rings, animals mistake litter for food and are poisoned.
- Sammy's problem: lack of trees. Effects: No roots to hold soil, soil washes away, air quality is reduced, and there are fewer habitats for birds and beavers.
- Benny's problem: no open space. Effect: Fewer places for animals that need lots of room to move about and search for food.

The Recycle Team didn't appreciate people littering their homes with trash. How would you feel if people dumped trash in your living room?

ACTIVITY - The Ties That Bind

Choose eight students to represent Danny Duck, Gilda Fish, Sammy Slaptail (the beaver), Benny Bear, water, air, forest, and a human being. Have students sit or stand in a circle. Give the ball of yarn to the "human," who offers an example of something that one of the other players does that has some kind of effect on him or her.

> For instance: What do humans breathe? (air) What animal flies in the air? (duck) What does the duck drink? (water) What animal lives in the water? (fish) Who else swims in the water? (humans, beavers) What do beavers need to build their houses? (trees in forest)

When a player is named, the ball of yarn is passed to that player, while the human holds the end-piece of the yarn. As the players name something that has an effect upon them, they hold the yarn and pass the ball to the player they name. The web of yarn that is formed illustrates how living things are dependent on the environment and upon each other in a variety of ways.

After a number of passes, have the players move back until the slack is taken up. Going around the circle, have players take turns pulling on their yarn so that the others can feel the effect. Next, cut one of the links of yarn, and as the players feel the tension break, have them drop their piece of yarn that was once connected to the others.

Discussion during this process could include: What happens to this group when one link is removed? Are some links more important than others? Did we name all the possible links? What would happen if we removed a player from the environment?

OPTIONAL ACTIVITIES

Ask for one or more volunteers to carry a trash bag for an entire day. In that trash bag they are to put everything, except food scraps, that they and their family throw away in that 24-hour period (wash all food-soiled packaging material before placing in the bag). This exercise can be continued in later lessons. You should see some difference in the contents of the bags as the students learn more about trash.

EVALUATION CHECKLIST

Are students able to...

- name three examples of how an item in the trash may cause a harmful effect on animals or people?

STORY FOR LESSON TWO: THE RECYCLE TEAM—THE EARLY DAYS

A few weeks after his adventure with the Recycle Team, the Dumpmeister had all of his trash in order and time on his hands. He decided to keep his promise and write the story of how Danny, Gilda, Benny, and Sammy met, and how they happened to arrive at his door on that fateful day with their car full of trash.

They weren't always the well-known champions for the planet they are now. As Gilda Fish said, "It all started in a faraway forest..."

It was the Fourth of July, and all over the city of Flotsam, families were celebrating the holiday with parades, barbeques, and other fun events.

After lunch, while some of the older kids pitched horseshoes, Kyle, who liked to watch birds, and his cousin Cindy decided to take a hike in the woods. "Watch out for wild critters," Kyle's dad called as they disappeared around the bend. Little did he know what an adventure awaited them!

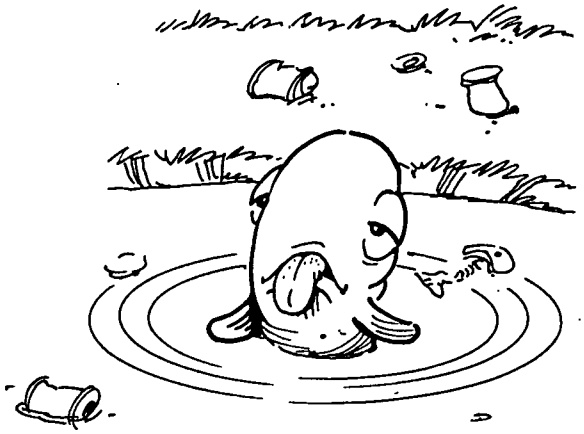
"What a beautiful day," said Kyle, as they walked along. "Birds are singing, frogs are croaking...but SOMEONE'S CRYING!"

"It's coming from over there, near that babbling, or should I say blubbering, brook," said Cindy, pointing ahead to a small group of trees next to a splashing stream.

Gilda Fish was having a bad day and feeling a little green around the gills.

Leaning over the water, the kids asked, "Excuse us, but we heard you crying. Can we help?"

"Just look at this mess!" exclaimed Gilda. "How would you feel if someone dumped all of their garbage in your g room?!"



"Your water is a little cloudy," agreed Cindy. "And I see cans and bottles and trash on the bottom, and the stream smells bad, too."

"I can't stay here any more," sighed the little fish sadly. "My cousin, a fish called Wanda, wound up in the emergency room last week with a bad case of fin flop from this water."

"We can help you," said Kyle. "Here's a glass bowl someone threw down the bank. I'll walk upstream, fill the bowl with some clean water, and then we'll put you in it."

"I'll stay here and clean up some of this mess," said Cindy.

Following the stream back toward the park, Kyle was surprised by a muffled voice pleading, "Get this thing OFF of me!"

Peeking over the bank, Kyle saw a very angry duck fighting to remove a plastic six-pack ring that was wound around his beak. A very large, but gentle bear was encouraging the duck to keep trying.

CONTINUED...

"Let ME help you," offered the boy, climbing down the bank.

The duck and bear jumped back, startled by the intrusion. "YOU SHOULD HELP!" the duck growled, finally pulling the ring off. "This is all your fault. People are destroying us and our homes with their trash. My friend here, Benny Bear, had to leave his home when PEOPLE decided that this would be a good place to throw their trash!"

"But I'm not one of THOSE people," answered Kyle. "I'll help you clean this place up if I can. I see you've already started carrying trash up the hill. Let's figure out how to get this stuff to the real landfill where it belongs."

Loaded down with all kinds of junk, the boy, the duck (who was somewhat calmer now) and the bear headed back downstream to where Gilda and Cindy were waiting.

After gently placing the rescued fish in the bowl, the sorry-looking band with their trashy burdens proceeded around the next bend in the stream, only to find a pink convertible blocking their path.

"SEE?!" cried the duck. "People aren't satisfied just throwing away the small stuff—they want to make our home their parking lot, too!"

"I'm afraid this wreck may be parked permanently," advised a voice from inside the car, "unless a couple of tires just happen to fall from the sky soon."

"You mean like these two that someone threw away back there?" asked the bear, holding up two well-worn but usable tires.

"Exactly!" exclaimed the voice. Out of the car climbed a pleased beaver with an extremely large flat tail. He introduced himself as Sammy Slaptail.

"This heap doesn't look like much," continued Sammy, "but it will run fine once I get these tires put on it, and it makes a pretty good home."

"Why don't you live in a dam like other beavers?" asked Cindy.

"Frankly, my dear, I don't have a dam," replied the beaver. "People keep clearing trees to build towns and to make wood products, leaving very few for fellows like me to build a home."

Working together, the group soon had the car ready to roll. "Thanks for your help," said Sammy. "Now what can I do for you?" he asked.

"We COULD use the car to help us haul this trash," replied Kyle.

"Happy to help," agreed the beaver. "Start piling all that stuff in here."

Half an hour later, as evening fell, the pink convertible was piled up to Benny's eyebrows with junk.

"I wish we didn't have to leave you now," said the kids, handing Gilda to Benny for safekeeping, "but our parents will be worried if we don't get back."

"Just be careful," winked the duck. "You might run into some wild human critters!"

"Thanks for all your help," said Gilda. "We can take it from here. We'll find a place for all this stuff, somewhere other than our own back yards."

And so, as the kids waved goodbye, the ragged bunch piled into the car and headed into the sunset. Soon they would meet the Dumpmeister, have their greatest adventure, and become those fine finned, feathered, and furry eco-champions, The Recycle Team.

LESSON THREE: WHERE IS "AWAY"?

PURPOSE

In this lesson, students learn that most trash is disposed of in landfills or incinerators. Students also learn about the large amounts of trash we generate.

MATERIALS YOU WILL NEED

- Student Booklets
- Poster

BACKGROUND INFORMATION

When we throw items away, we seldom think about where they go. Decisions about how to dispose of our trash affect our environment, as well as our economy and health. Trash disposal has become a political and ethical issue as well.

People have always dealt with their trash by dumping it, burning it, converting it into something else, or minimizing it. While it was once common practice to throw trash into an open pit or into the streets, this has now become unacceptable because of health hazards, as well as the sheer volume of waste.

As a nation, the majority of our municipal trash is dumped into landfills. In sanitary landfills, the trash is compacted and then covered with soil or other specialized material to eliminate odors and discourage animal and bird scavengers. Liquid seepage (leachate) is minimized by lining the landfill with dense clays or heavy plastics. Due to the lack of light, air, and moisture, trash in landfills decomposes very slowly, even trash that is "biodegradable," like an apple core or banana peel. The remainder of our trash is burned in incinerators or recycled.

INTEGRATION ACROSS THE CURRICULUM

The activities in this lesson help students develop critical thinking and analysis skills by examining how trash is generated and discussing the concept of where it goes. Additional skills include:

- Language Arts: Reading, speaking, vocabulary development.
- Mathematics: Counting, solving multiplication problems that represent real-life situations, collecting and displaying data, understanding average and percent.
- Science: Making predictions based on prior knowledge.
- Social Science: Interpreting graphic information on poster, reading a map.

VOCABULARY

Landfill: A place where trash is taken for disposal. In sanitary landfills, the trash is covered with layers of soil or other specialized material.

Incinerator: A furnace in which waste materials are burned to create a much smaller amount of ash waste (which is taken to a landfill). The heat from some incinerators is used to generate electricity.

REVIEW

Review Lessons One and Two by asking the students about the relationship between our trash and how it affects our world. If necessary, suggest examples of how waste often becomes litter or pollution, which affects people and even our friends, the Recycle Team. Remember how this problem affected the characters in the last lesson?

CONTINUATION FROM LESSON TWO

If students volunteered to carry a trash bag for a 24-hour period, the following activities will demonstrate the large amount of trash we generate.

Divide the class into the same number of groups as there were students who volunteered to carry trash for 24 hours. Have each group select a Recorder to list the types of trash (paper, plastic, metal, glass) and the number of pieces of that trash.

If there is more than one group, ask students to compare their results. Which group had the most trash in a 24-hour period? Which group had the least? Which had the most paper, the most plastic, the most glass, the most metal?

Each day, the average American generates about 3.5 pounds (about what a heavy book weighs) of household trash. Estimate how much the 24-hour bags of trash weigh and discuss how they compare with the national figure.

ACTIVITY - How Much Trash?

Have students turn to Page 5 of the student booklet. Discuss the facts about the amounts of household trash that the average person throws away. These figures are for the United States. Ask students to write down the number of persons in their family in the box and multiply to find the estimated amount of their family's trash.

Remind the class that the numbers in the chart are for a typical American family. Discuss how these figures might change based on whether there are babies in the family...or teenagers...or elderly persons. Ask how the amount of trash might vary depending on the season of the year.

ACTIVITY - The Sandwich Shop

Write the heading TRASH on the board. Have the students turn to Page 5 of their booklets. Ask them to describe the kinds of trash associated with the Peanut Butter Sandwich Shop. If the students need hints, have them think about only one illustration item at a time (for example, the truck delivering the loaves of bread).

Listed below are some examples.

- loaves of bread (plastic or paper wrapping)
- peanut butter containers (jars, lids)
- sandwich "extras" (bottles for honey, jars for jam)
- sandwich packaging (paper to wrap the sandwich, boxes and paper sacks for sandwiches to go)
- food (uneaten food scraps)
- table settings (paper plates, forks and knives, paper napkins)
- additional trash may result from...
  - —wear and tear on delivery trucks (worn-out tires, batteries, and the truck itself)
  - —lunch trash from the delivery truck drivers and from the Shop's employees
  - —paperwork (sandwich order forms, inventories, cash register receipts, tax forms)

Ask the class to count the number of pieces of trash that would result if Danny orders just one sandwich to eat in the shop. How would this change if it was a take-out sandwich?

ACTIVITY - Landfills and Incinerators

Ask the students to look at the poster. Discuss the illustrations of a landfill and an incinerator. Let the students follow the route of the trash from the natural resources to homes and factories, and into the landfill. Describe how each day the trash is covered with a layer of dirt or other material. Students can also follow the route of the trash into the incinerator as it is dumped, burned, and turned into hot gases and ashes.

Make sure students realize that all of the trash we throw out usually goes to a landfill or an incinerator. This can be demonstrated by having ten students stand in front of the class and represent "trash." Seven students (70% of the "trash") lie down in a "landfill" and the other three hop up and down in the hot "incinerator." Remind students that much of this trash shouldn't go to a landfill or incinerator in the first place.

Discuss problems that can result from disposing of all of our trash in landfills or incinerators. (Resources are wasted and can't be used again; possible air, water, and land pollution; many landfills are filling up quickly and it is difficult to find a place to put new landfills and incinerators.)

If the custodian collected classroom trash in a plastic bag (a Lesson One optional activity), this is a good time to put it on display. Discuss how much trash accumulates in just a short time.

Ask students if they have other ideas about how to get rid of trash. Discuss the environmental, energy, and health implications of their suggestions.

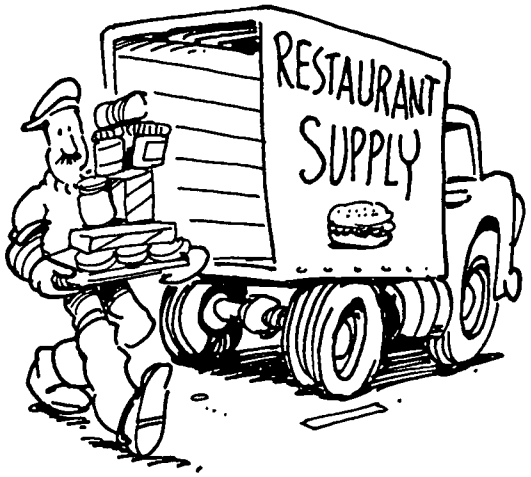
ACTIVITY - In Our Community

Discuss how the trash is picked up and transported in your community. Discuss how the trash is disposed of in your community. Locate the local landfill or incinerator on a community map.

EVALUATION CHECKLIST

Are the students able to...

- explain where trash goes when it "goes away"?
- define "landfill" and "incinerator"?
- give a reason for the large amount of trash sent to landfills and incinerators?



LESSON FOUR: SMART SHOPPING

PURPOSE

In this lesson, students learn to reduce the amount of trash by becoming "smart shoppers." Smart shoppers:

- buy only what they need;
- avoid overpackaged products with packaging that is difficult to recycle; and
- buy refillable, concentrated, and non-toxic products.

BACKGROUND INFORMATION

The most effective way to address our trash problem is to reduce its amount before it is made. Often the items we buy have more packaging than they really need. For example, small items may be packaged in a large piece of colorful cardboard to make them stand out on a crowded shelf; other items may be encased in plastic to deter theft. Salespeople often assume the buyer wants a bag in which to place an already-wrapped item. These types of "extra" packaging are a significant part of our nation's landfill problem because they end up in the trash.

This lesson focuses on source reduction. Source reduction is the design, manufacture, and use of products to reduce their amount, the amount of their packaging, and their toxicity. Students should learn to make choices that generate the least amount of waste and environmental damage.

INTEGRATION ACROSS THE CURRICULUM

The activities in this lesson help students develop critical thinking and analysis skills by examining and discussing product packaging and other concepts for reducing waste generation. Additional skills include:

- Language Arts: Analyzing media, speaking, consumer reading, writing a solution to a problem as a cooperative group, vocabulary development.
- Mathematics: Collecting and analyzing data, understanding patterns and relationships, measuring.
- Science: Observing, organizing and classifying objects, using natural resources, understanding relation of science to social issues.
- Social Science: Exploring efforts to protect natural resources, analyzing impact of today's decisions on tomorrow's environment.

MATERIALS YOU WILL NEED

- Student Booklets

VOCABULARY

Smart Shopper: A person who is aware of how his or her buying actions affect the environment and who makes responsible decisions in purchasing products.

Packaging: The materials in which products are wrapped. Plastic, foil, cardboard, and polystyrene foam are typical examples of packaging. Some packaging is recyclable.

Product: Something that is made or created. Toys, some foods, paper, and furniture are all products.

Toxic: Poisonous and harmful.

REVIEW

Review the content of Lessons One through Three by asking students to discuss the problems that have been addressed (too much trash, difficulty in getting rid of the trash, and problems caused by trash). Tell the students that in this lesson, the Recycle Team is going to show them one way in which they can help solve our trash problem.

☆ ACTIVITY - Wrap It Up

Discuss what the students already know about the many ways foods are packaged. Ask students to name a food and describe what material is used to package it. Examples of packaging might include metal cans, glass jars, cardboard, paper bags, waxed paper, plastic bottles, etc.

Write the following categories on the chalkboard:

Foods With:
no wrapping
1 wrapping
2 wrappings
3 or more wrappings

Now ask the students to give examples of food products that match each category. Examples that students might name include fruit (no wrapping), pancake syrup (one wrapping), cereal (two wrappings—wax paper and cardboard), and microwave meals (three or more wrappings).

☆ ACTIVITY - Let's Do Lunch

Have the students read Page 6 of their student booklets.

Ask the students who brought their lunches from home to place them on their desk. (If there are only a few lunches, you may want to combine them in one place.) Using the chart in the student booklet, have the students list the items in their lunches and then circle the type of packaging materials used for each item. Students who generally buy their lunches at school can also participate by analyzing cafeteria packaging. Discuss reasons for the various ways foods are packaged. Ask students if they think they are throwing away too much trash.

Ask students for ideas on how Benny Bear can pack his lunch, shown on Page 6. The objective is for Benny to use a minimum of packaging when he packs his lunch for his trip through the woods.

ACTIVITY - Be a Smart Shopper

Have the students look at Page 7 of their booklets. Tell them they need to help the Recycle Team decide which items to buy and which to avoid. Discuss the following principles:

- Reduce the amount of toxic materials. Discuss common toxic items in the home, e.g., pesticides, paint thinner, batteries. Which item is toxic, and which would be a good substitute? (toxic: bug spray, air freshener; substitute: fly swatter, box of baking soda)
- Use long-lasting items. Discuss the waste created when we use an item once, and then throw it away. Which is a use-it-once item, and which would be a good substitute? (use-it-once: paper cups, disposable batteries, wooden pencils; substitute: ceramic mugs, rechargeable batteries, refillable mechanical pencils)
- Use second-hand items. Discuss how we can reduce waste if we use something the original owner no longer needs or wants. What store would Benny go to find a sweater or a pair of ice skates? (second-hand store, swap meet)
- Don't buy if you can borrow. Which store would Sammy go to for a book or a video? (library; video rental shop)
- Buy concentrated products and add the water later. Concentrated products, such as fruit juice, require less packaging.

Ask the students to see if they can discover Gilda's secret message. Fill in the blanks by finding letters of the same color from the signs on the stores pictured on Page 7. The secret message: LESS IS BEST.

ACTIVITY - Time Out for a Commercial

Divide the class into groups. Challenge them to design a commercial for a food product that points out the benefits of the small amount of packaging. This commercial could be used as a radio or TV ad, or it could be drawn for a newspaper or magazine advertisement.

Have the students who chose the radio or TV format give their presentations orally. The students who created magazine or newspaper advertisements could exhibit their ideas on a bulletin board.

OPTIONAL ACTIVITIES

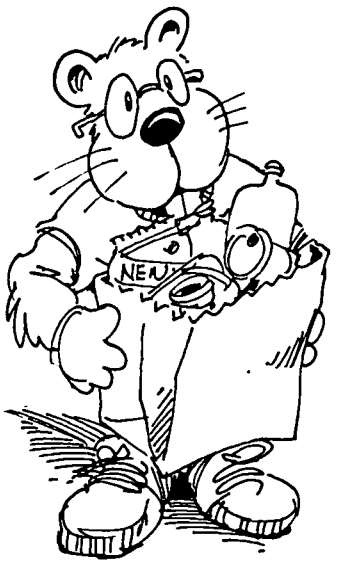
- Display a large bag of chips and several smaller bags that together contain the same quantity. Ask the students how many packaging materials were used in each product. If the students say "one," remind them that the smaller packages were originally together in a larger package (probably a cardboard box). Ask students to write on the chalkboard the number of ounces of food in the large and in each of the small bags of chips, then add the total number of ounces in the small bags of chips.

  Compare the quantities and the prices. Ask which package the smart shopper would buy. Discuss other things the smart shopper might look for, i.e., taste, freshness, ingredients, and cost within budget.
- Ask to see the school's supply cabinet. Look for examples of overpackaging. Have students write a letter stating their recommendations about how the school should avoid buying products that are overpackaged.

EVALUATION CHECKLIST

Are the students able to...

- name at least two examples of how they can reduce trash by smart shopping?
- recognize examples of overpackaging?



LESSON FIVE: REUSE IT

PURPOSE

In this lesson, students learn the importance of reusing products instead of throwing them away. They also learn the different ways to reuse products.

BACKGROUND INFORMATION

Many products are still valuable after their first use. Glass, metal, and plastic containers can be used to hold items more than once. Outgrown clothes, linens, furniture, and other household items that are no longer valuable to their original owners can be given to people who will appreciate them.

Reusing an item should be considered before recycling. Reusing requires no new manufacturing. Recycling, on the other hand, requires energy to refabricate the item.

INTEGRATION ACROSS THE CURRICULUM

The activities in this lesson help students develop critical thinking and analysis skills by examining products and making decisions about how they can be reused. Additional skills include:

- Language Arts: Listening to a story, comprehending the story, writing a new ending to a story, vocabulary development, oral language.
- Mathematics: Classifying and sorting information, determining reasonable solutions to a problem.
- Science: Conserving natural resources.
- Social Science: Identifying responsibilities which people assume related to home, school, and the community.

MATERIALS YOU WILL NEED

- Student Booklets

VOCABULARY

Aluminum: A strong, silver-colored metal made from bauxite ore. Cans made of aluminum are easily flattened, do not have a seam on the side (compare this to a soup can, which is made of steel and has a seam), and usually contain beverages.

Reuse: Repeated use of a product in its original form. For example, a new shoe box holds shoes and can be reused as a container to hold baseball cards.

REVIEW

Ask students to review ideas about packaging based on their activities in Lesson Four. Continue with a discussion of reusing containers to store (package) materials. Have they (or their families) ever used old coffee cans, margarine tubs, or glass jars to store other items?

Explain that product reuse is another way to reduce the amount of trash. Instead of throwing it out, the product is reused. Here are some discussion questions:

- What items can be reused for the same purpose they were intended? Examples include old clothes and refillable water bottles.
- What items can be used for a different purpose? Examples include coffee cans, glass jars, plastic bottles, and shoe boxes.

ACTIVITY - Lost and Found

Distribute student booklets and ask students to turn to Page 8. Read the "Lost and Found" story aloud and ask the students to follow along in their booklets. (You will find the story at the end of this lesson.)

To find out what Gilda will say, ask students to solve the puzzle on Page 9. They should take letters from the "USE IT AGAIN" sign on Page 8. After students fill in the letters, discuss the meaning of the phrase, "One person's trash is another person's treasure."

Write the characters' names on the board. Ask the following questions and write the student responses on the board:

- What does each of the characters need? (see list below)
- What items did each character find that they didn't need anymore? (see list below)

Story Characters' Needs

- Benny Bear: needs box to hold his baseball cards
- Sammy Slaptail: needs a jacket
- Danny Duck: needs something to hold flowers
- Gilda: needs a clean home (the stream)
- Kyle: needs some toys for his hamster
- Cindy: needs something to hold seedlings

"Extra" Things Each Character Finds

- Benny: apple juice jar
- Sammy Slaptail: Styrofoam cups, plastic bottles, paper clips
- Danny Duck: aluminum cans
- Gilda Fish: glass soda bottle
- Kyle: old shoe boxes
- Cindy: outgrown jacket, sweater, shoes

Ask students to suggest possible solutions to the Team's problem. Here are a few suggestions:

- Benny gives his apple juice jar to Danny to put his daisies in.
- Sammy gives his Styrofoam cups to Cindy for her seedlings.
- Kyle gives Benny a shoe box to hold his baseball card collection.
- Danny, Gilda, and Sammy give Kyle their aluminum cans and glass and plastic soda bottles so that he can redeem them for cash at a recycling center. Then he will have money to buy some hamster toys, and Gilda's stream will be clean.

ACTIVITY - Write Your Own Story

Ask the students to write their own creative ending to the story (about half a page). Have them include other items that would help the Team solve their problems. The students can share their stories by reading them aloud, by displaying them on a bulletin board, or performing skits.

Tell students that now would be a good time to start "reusing" paper. Ask them for ways they can reuse paper in the classroom. (Examples: erase and start over if needed, use the other side.) Look around the classroom for a "Reuse Paper" box. Once students finish their stories, they can help decorate the box. Then they can look through their desks for paper to place in the reuse box.

Make sure students understand that reusing helps reduce the amount of trash that goes to the landfills. Also, point out that reusing means that we don't have to manufacture as many new products, thus saving energy and natural resources.

OPTIONAL ACTIVITIES

Encourage students to use a reusable container to carry lunch items. In class, discuss students' suggestions on reusable containers to hold food items. Some examples:

- Small screw-top drink containers to carry drinks.
- Clean and reuse small margarine tubs for raisins, nuts, and other small snacks.
- Larger plastic tubs can hold sandwiches cut into interesting shapes. Don't forget to include foods like apples, oranges, and bananas that don't need other containers.

Have an "exchange day" when students bring in items from home that another student might be able to use. Suggestions: old clothes, books, toys, Styrofoam trays, plastic bottles. You may also want to set up a "white elephant" store where students receive "credits" for items brought in, and use these credits to "purchase" items.

EVALUATION CHECKLIST

Are students able to...

- identify ways to reuse paper, plastic and glass bottles, and aluminum cans?
- explain why it is important to reuse products?

STORY FOR LESSON FIVE: LOST AND FOUND

It was Saturday and the Recycle Team members were all busy doing "Saturday things." Cindy was working in her garden. Next door, Kyle was cleaning out his pet hamster's cage.

"Cindy, your garden is sure growing fast. Look at all those flowers!" remarked Kyle over the backyard fence as he was carrying Herman the hampster's cage.

"I know," replied Cindy. "I have so many flowers that I'm going to bring some to each Team member when we meet at Gilda's this afternoon. I've transplanted the bigger plants into all the pots I have. But I still need pots to plant my young seedlings. Do you have any I could borrow?"

"Sorry, Cindy, my mom doesn't use flower pots. All of our flowers are planted in the ground." said Kyle.

"Thanks anyway," said Cindy. She walked into the garage to see if she could find any pots she might have overlooked. Cindy didn't find any pots. What she did find were lots of old clothes she had outgrown: a sweater, a jacket, and a pair of shoes.

Meanwhile, Kyle cleaned Herman's cage and began to play with his pet. "Gosh, Herman, it must be really boring in that cage when I'm not playing with you," he said. "Maybe I should go to the pet store and buy some toys for you. But I can't. I spent all my money last week on video games."

Kyle put his hamster safely back in the cage and took him up to his room. "Well, maybe you could play in this old shoe box. I have lots of them...Oh no! Herman, don't eat the shoe box! Well, I guess that wasn't such a good idea."

In the forest, Benny Bear was in his den, searching through his baseball cards. "Now, where is that Rookie Frank Thomas card? I know I have it!" Benny's baseball cards were scattered everywhere!

CONTINUED...

"Wait, I know, I was looking at cards before I went to sleep last night!" With that, Benny Bear dove under the bed and came up with a handful of cards. "Nah, it's not here. Oh, I remember, I showed my cards to Sammy Slaptail last time he was over; maybe they're on the kitchen table." Benny ran over to his table. He found more TV dinner trays and an apple juice jar on the kitchen table. But no Rookie Frank Thomas card.

"Maybe it's in my closet!" he exclaimed, dashing back into his den. He found baseball cards in the big pockets of his jeans and on the closet floor. He even found three cards in his sneaker, but no Rookie Frank Thomas card. "Boy, I wish I had some boxes or something to keep these cards in. I can never find anything when I need it. Oh well. I guess I'll just go over to Gilda's and meet the rest of the Team."

In another part of the forest, Sammy Slaptail was a little chilly. He was looking for a jacket. "I can't find anything in this car! It's such a mess! I know I have an old jacket in here SOMEWHERE!" Sammy began pulling papers out of the glove compartment searching for his jacket. Not finding it, he looked under the seats. Paper clips, rubber bands, pencils, crayons, and scissors were stuffed under there. He also found some Styrofoam cups and a few plastic bottles thrown under the back seat. "I gotta get rid of this trash," Sammy muttered, as he continued his search. "Oh, now I remember! I gave that jacket to Uncle Albert. Oh well."

"Doo bee doo bee doo..." Danny Duck was just relaxing, listening to his favorite tape. Just coolin' it...shades on, drinkin' soda from an aluminum can, mindin' nobody's business but his own, when he heard, "Hi, Danny!"

"Oh no, mumble, grumble, mumble, hi, Cindy," grumbled Danny. "How come she has to ruin my nice quiet day?" he thought.

"I was working in my garden this morning and I thought you might like some flowers," said Cindy, handing him a bunch of beautiful yellow daisies. "Just remember to put them in water. I'm meeting the rest of the Team down by Gilda's stream. Are you going, too?" she called as she skipped away, giving him a friendly wave.

"Now, what am I going to do with THESE?" thought Danny. "Well, I'd better find something to put them in before they die." Danny went back into his home and searched...and searched...and searched. "Aluminum cans...aluminum can...another can, whew! I didn't know I had so many aluminum cans in here! Well, since I've collected them all in one place, I'd better put them in this bag." Danny got a large garbage bag and filled it with the cans. "I guess I could go over to Gilda's and see what the rest of the gang is up to..."

Waiting for her friends to arrive, Gilda Fish was happily swimming down the stream in graceful figure-eights. BONK! She bumped her head on something. "A glass soda bottle in my living room! Why don't people take care of this in the right way? They sure wouldn't like it if I dumped my garbage in their house! I'm tired of finding old plastic and glass bottles and aluminum cans in my living room! Something has to be done about this!"

Then she heard the rest of the Team members coming to the stream.

"Puff, puff, puff...sorry I'm late, guys," panted Sammy Slaptail, running up the trail. "I've been looking for my jacket. I tore my car apart looking for it!"

"Hey, I was looking for things this morning, too," said Benny Bear.

Then the Team members began to tell each other how they couldn't find something they needed but managed to find an awful lot of trash.

"Wait!" said Gilda. "We all have a problem that we can't solve by ourselves. But if we work together, we can come up with some solutions. I have an idea."

LESSON SIX: THE NATURE OF RECYCLING

PURPOSE

In this lesson, students learn that natural resources are important because they are used to make many products. Recycling is introduced as an important means of conserving natural resources.

BACKGROUND INFORMATION

There are two types of natural resources: nonrenewable and renewable. Nonrenewable natural resources are natural resources that cannot be produced by nature except over a long period of time. Petroleum and metal ores are examples of nonrenewable natural resources needed to make many of the products we use every day. Renewable natural resources are raw materials or forms of energy that come from a natural endless source. Examples of renewable natural resources are wind, sun, water, trees, and animals.

Many natural resources are being consumed at an alarming rate. When we throw products away, more renewable and nonrenewable resources have to be used to make new products. By purchasing products wisely, and by reusing and recycling products instead of throwing them into the trash, people can conserve these valuable natural resources.

INTEGRATION ACROSS THE CURRICULUM

The activities in this lesson help students develop critical thinking and analysis skills by examining relationships between products and natural resources. Additional skills include:

- Language Arts: Listening to a story, comprehending the story, speaking, vocabulary development, brainstorming.
- Mathematics: Classifying objects according to attributes.
- Science: Using and conserving natural resources, resources used to create products, manufacturing technology.
- Social Science: Interpreting pictures by comparing information, relating words and phrases to pictorial content.

MATERIALS YOU WILL NEED

- Student Booklets
- Items made of glass, plastic, aluminum, and paper

VOCABULARY

Conserve: The care, protection, or wise use of natural resources.

Recycling: To recover and make new products out of used materials, such as used aluminum, glass, plastic, and paper, for use in manufacturing new products.

Natural resources: Materials found in nature that are useful for people to live. Trees, soil, minerals, and animals are natural resources.

Manufacture: To make a product.

Mineral: A natural resource taken from the earth to be used in the creation of metal or other objects. Stone, coal, gold, and aluminum ores are examples of minerals.

Product: Something made by nature or industry. Some examples of things made from natural resources are aluminum cans, plastic water bottles, glass juice containers, and notebook paper.

REVIEW

Review the previous lessons by asking students to describe alternatives to throwing things away. Encourage students to give examples of reusing items, based on what they learned in the previous lesson.

ACTIVITY - Where Did It Come From?

This activity helps students understand the relationships between common products and the natural resources needed to create them. We have already learned about different kinds of products in the trash, and we learned how to reduce the amount of products in the trash by becoming smart shoppers. Now we will see how these common products are made.

Display one or more products made from aluminum and discuss the following:

- Ask students why aluminum products are useful (lightweight, strong).
- Bauxite ore, a natural resource, is the main ingredient needed to produce aluminum.
- The major bauxite deposits in the United States are found in Arkansas, Alabama, and Georgia (you may want to show these states on a map).
- It takes about four pounds of bauxite and a great deal of energy resources to produce one pound of aluminum.
- Aluminum products can also be made from used aluminum. This is called recycling. When we recycle, we use less bauxite ore and less energy, which conserves natural resources.

Display one or more products made from glass (don't forget to include eyeglasses). Discuss the following:

- Ask students why glass products are useful (transparent, hard).
- Silica (refined sand) is the main natural resource needed to produce glass.
- Glass products can also be made from used glass. Recycling glass means we conserve silica and energy.

Display one or more paper products and discuss the following:

- Ask students why paper products are useful (good for writing and printing).
- Trees are a valuable natural resource and are a main ingredient in paper.
- Every ton of paper recycled will save over three cubic yards of landfill space.
- Recycled newspapers are used to make more newspapers, thereby conserving forests.

Display one or more products made from plastic and discuss the following:

- Ask students why plastic products are useful (lightweight, unbreakable, easily molded into different shapes).
- Oil and coal are needed to make plastic.
- Some plastics are recyclable. Recycled plastic is used to make other plastic products such as containers for motor oil and liquid soap. It is also used to make the stuffing for sleeping bags and jackets.
- Recycling plastic helps conserve oil, a valuable natural resource.

ACTIVITY - Which Is It?

Write these two titles on the chalkboard: NATURAL RESOURCES and PRODUCTS. Explain that natural resources are found in nature but that products are things made of natural resources for a specific purpose.

Name each of the following items and ask students whether it is a natural resource or product. As students provide the answer, list the items under the proper heading.

Natural Resources	Products
trees	leather shoe
glass jar	newspapers
animals	soda can
cotton ball	petroleum
metal ores	cardboard
rocks	lumber
coal	plastic soda bottle
minerals	window
oil	paper
wind	candle
sunshine	glass bottle

Discuss how we would get along without the products if the natural resources needed to make them weren't available.

ACTIVITY - Manufacturing and Recycling

Ask students to turn to Pages 10 and 11 of their booklets. Referring to the illustrations, point out the manufacturing and recycling processes. Point out that manufacturing a product for the first time uses natural resources. (Students will study these pages in Lesson Seven.)

Ask students what happens to natural resources when we throw away products. (More natural resources must be used to make new products.) How does recycling conserve natural resources? (Recycling a product conserves natural resources because the same natural resources are used again. When a product is recycled, it then becomes a resource. Using recycled resources reduces the need for more materials to be taken from natural resources. In addition, recycling saves large amounts of water, electricity, and gas needed to make products from natural resources.)

OPTIONAL ACTIVITIES

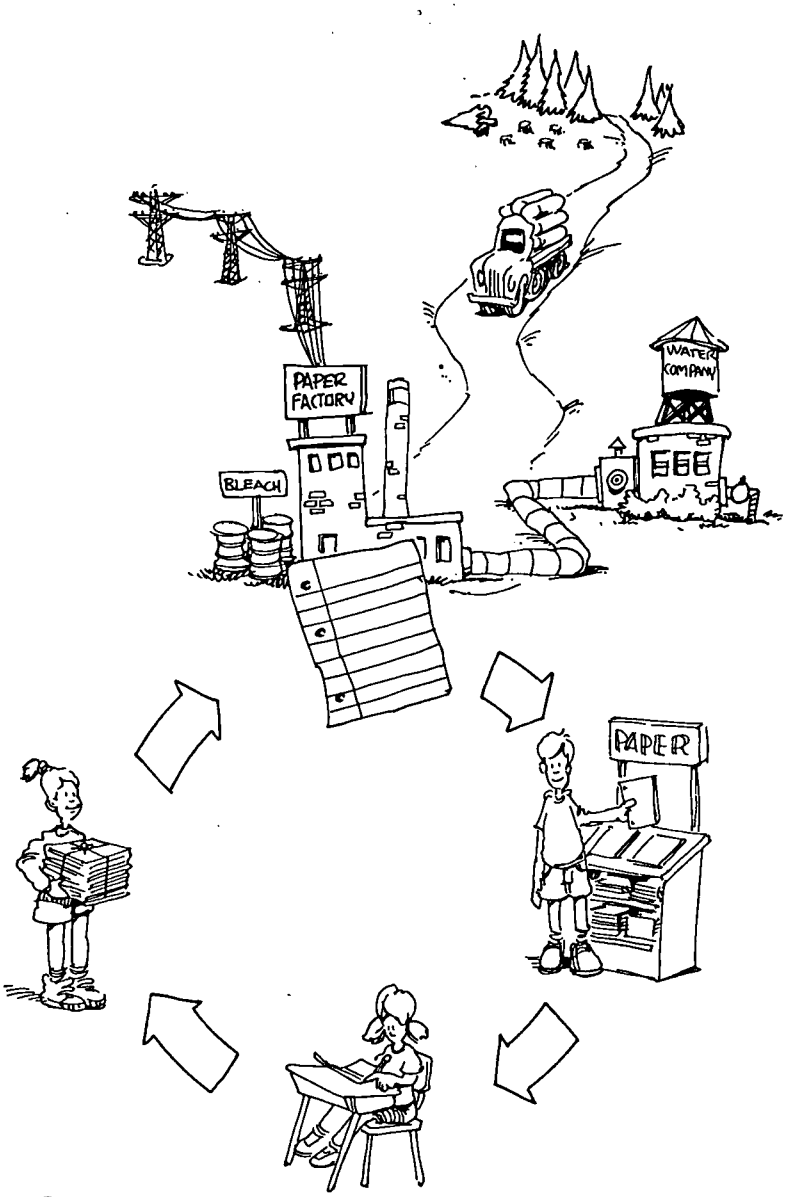
Review the story in Lesson Two about how trash affects the Recycle Team. Remind students that, in the long run, recycling helps conserve natural resources for:

- Benny Bear: less trash reduces the need for more landfills so that Benny's cave won't become full of litter.
- Sammy Slaptail: recycling newspapers reduces the need to cut down so many trees, so that Sammy and his friends will have a place to live.
- Gilda Fish: recycling beverage containers and oil reduces litter and water pollution, which made Gilda and a fish called Wanda very sick.
- Danny Duck: proper disposal of six-pack rings reduces the threat to animals, so that other ducks like Danny won't be caught in them.

EVALUATION CHECKLIST

Are the students able to...

- explain why natural resources are important?
- identify the natural resources that are used to make plastic, paper, and metal objects?
- explain the importance of recycling?



LESSON SEVEN: THE RECYCLING LOOP

PURPOSE

In this lesson, students learn about the "recycling loop" and why we need to purchase products made from recycled materials. They also learn how to identify recyclables and recycled products.

BACKGROUND INFORMATION

It cannot be emphasized enough that we must purchase products made from recycled materials. Only when this happens do recycled materials have real value. Only when this happens is there economic incentive to recycle and save natural resources.

When purchasing materials, look for information about recycled content. Many products are labeled "recyclable," meaning it is possible to recycle them. Even more important is a label that says the product was "made from recycled materials." This means that the manufacturer used recycled materials for the content, thus helping to close the "recycling loop."

There are two sources of recycled materials used in the manufacturing process. One is scrap material created in the manufacturing process. However, from the perspective of closing the loop, the more important source is "post-consumer waste" (or "PCR" for post-consumer recycled). Post-consumer waste has been used by the consumer and then recycled. Examples are recycled newspapers and beverage containers.

INTEGRATION ACROSS THE CURRICULUM

The activities in this lesson help students develop critical thinking and analysis skills by examining the concept of the recycling loop. Additional skills include:

- Language Arts: Reading, speaking, vocabulary development.
- Mathematics: Identifying patterns and relationships, mobius strip.
- Science: Understanding systems and interactions (cycles).
- Social Science: Exploring supply and demand (economics), using and interpreting symbols, learning the origin of scientific developments, analyzing how today's decisions impact the future.

MATERIALS YOU WILL NEED

- Student Booklets
- Scrap paper, scissors, and tape or paste

VOCABULARY

Recycling Loop: The continuous cycle of natural resources and products when recycling occurs. The cycle includes the following stages:

- The product is used.
- After use, the product is turned over to someone who recycles it.
- The product is remanufactured (cut, crushed, melted, etc.) into a new product.
- The new product made of the recycled materials is [illegible]ased.
- [illegible]roduct is used.

REVIEW

Divide the students into four teams representing each Recycle Team character.

- Benny Bear's glass products
- Danny Duck's plastic products
- Gilda Fish's aluminum products
- Sammy Slaptail's paper products

Ask the teams to list recycled products. Assign one person from each group to write the products on the board under their team's category. Remind students that all of these items are made from a natural resource and that each of these products can be recycled, thus saving natural resources.

☆ ACTIVITY - The Recycling Loop

Remind students that in Lesson Six, they learned the importance of conserving natural resources by recycling products. Nature conserves and recycles natural resources through a continuous cycle. An example of a continuous cycle is the water cycle: ocean water evaporating to clouds, rain, mountain springs, streams, rivers, and back to the ocean. We can learn from nature's continuous cycle by completing the recycling loop. Review the "recycling loop" definition.

Ask the students to turn to the illustration on Pages 10 and 11 in their booklets and discuss the following:

- What happens to used products once they are recycled? (They are made into new products.)
- Where do they go? (To a recycling center instead of to a landfill.)
- What happens to them? (They are made into new products.)
- What happens to them after they are made into new products? (They go to stores to be purchased again.)
- Identify five familiar products made from each of the following: aluminum, paper, glass, and plastic.

The economic concept of "supply and demand" applies to recycled products. To demonstrate this, ask students to imagine what would happen if...

- everyone saved and recycled all of their soda cans, and
- the people who make soda cans insisted on making all new cans from natural resources.

Hopefully, students will realize that the recyclable cans would have no value and would eventually be dumped into the landfill. And of course the same is true for glass, plastic, and paper products. The recycling loop is completed only if consumers buy recycled products in addition to buying recyclable materials.

ACTIVITY - Recycling Symbols

Ask students to turn to Pages 10 and 11 in their student booklets. Point out the recycling logo. The origin of the recycling logo is the mobius strip. A mobius strip, named by a German mathematician named August Mobius, has no end and only one side. Since it is a continuous loop, it has been adapted as a recycling symbol. The arrows inside a solid circle indicate that the product is made from recycled materials. Ask students to look for the recycling logo on products at home and when in the grocery store. Even better, ask them to also look for the words "made from post-consumer content."

Ask students to make a mobius strip using the following directions.

- Using scratch paper, cut a strip the length of the paper and about one inch wide.
- Mark one end of the strip with an "X."
- Turn the paper over and mark the opposite end with an "X."
- Put the two ends of the strip together and twist one end so the two "X" marks are together.
- Paste or tape the ends together.

Have the students draw a line, lengthwise, along the middle of the strip. The line will eventually meet itself.

ACTIVITY - Who's On First?

Select six students to represent industries involved in recycling aluminum soda cans. Assign the following roles to the students:

Bottler (person who fills cans with soda)
Shopper
Can manufacturer
Recycler
Storekeeper
Trucker

Ask each student to make a sign with their title on it. (Use scratch paper from your reuse box.) Ask them to describe what they do, e.g., "I am a recycler. I collect soda cans." Starting with the bottler, ask the students to line up in the order of events and explain what they do with the product after they are done with it.

- Bottler: Fills cans with soda and sells them to the storekeeper.
- Storekeeper: Sells can of soda to the shoppers.
- Shopper: Buys the soda, drinks it, and recycles the empty can.
- Recycler: Takes the empty soda cans and gives them to the container manufacturer.
- Container manufacturer: Makes new cans from used cans.
- The Trucker appears in several places in the chain—wherever delivery by truck makes sense.

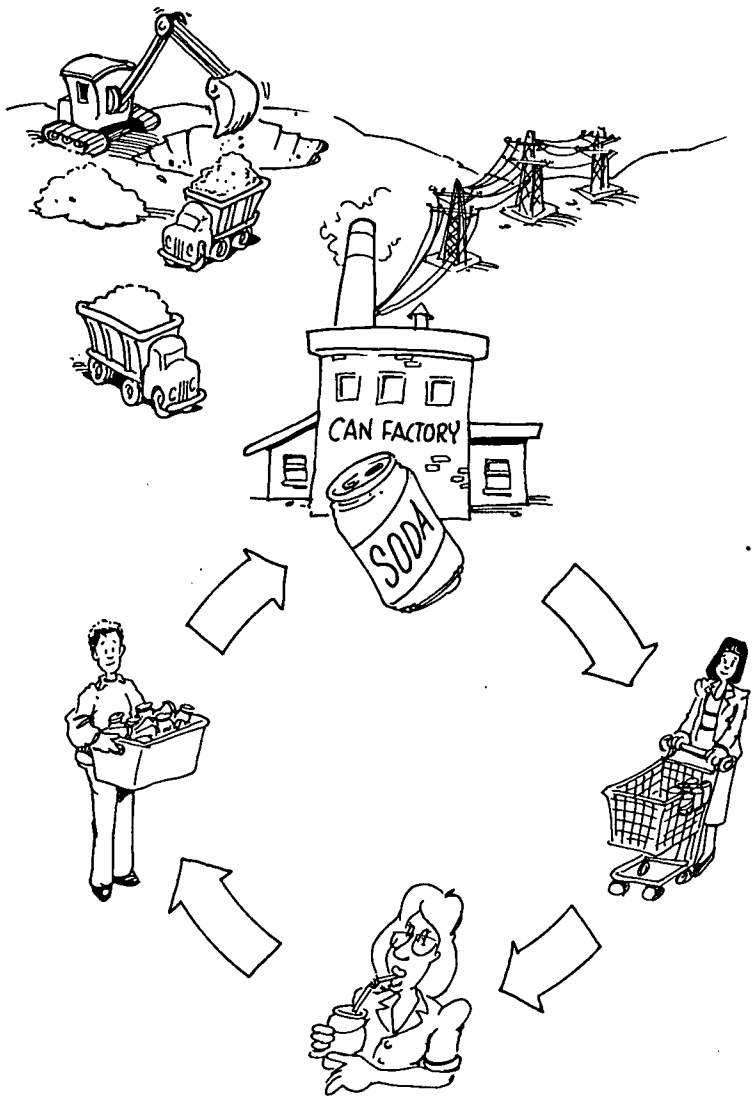
Point out that the students represent a "recycling loop." This recycling loop is closed or completed only if the shopper continues to buy products made from recycled materials.

This activity can be repeated with another set of six students to represent recycling loops for plastic, glass, and paper products.

EVALUATION CHECKLIST

Are the students able to...

- describe what happens to a product after each step in the recycling loop?
- identify recyclable and recycled products?
- describe why we need to buy products made from recycled materials?



LESSON EIGHT: RECYCLE-WHAT, WHERE, AND HOW

PURPOSE

In this lesson, students learn about recycling in their own community. They learn where to recycle and what materials are recycled.

BACKGROUND INFORMATION

Every community has opportunities for recycling, but each community is likely to be a bit different from its neighbor. The differences are mainly in terms of what is recycled, where it's recycled, and redemption (payment for turning in recyclable items).

The primary means of collecting recyclables are described below. If you don't know which of these methods are used in your community, call the local Public Works Department to find out...

- what is recycled
- where it's recycled
- rules about recycling (such as how to prepare materials for recycling and what not to put in a recycling container)

CURBSIDE COLLECTION - COMMINGLING

"Commingle" means "to combine into a common fund." This method provides one container for all your recyclables. The curbside recycling bin is separate from your trash container. Here's how it usually works: Place your recyclables (glass jars, bottles, aluminum cans, plastic soda bottles) in the recycling bin. Some communities will ask you to rinse them first. Set newspapers off to the side or on top of the bin in paper bags. The recyclables are sorted later at the recycling facility where the items are taken.

CURBSIDE COLLECTION - SEPARATE CONTAINERS

Containers for recyclables are placed side by side or stacked on top of one another. Although you do the sorting, it's easy. A special recycling truck, which has separate built-in sections for the different recyclables, picks up your items.

DROP-OFF SITES

Sometimes, rather than have the recycling program come to you, you go to the recycling center. Recycling centers often take many types of recyclables, making it easy for you to take everything to one place. Some recycling centers will pay you for your recyclables and some accept items as a donation only. Either way, you're helping the environment by conserving natural resources.

REVERSE VENDING MACHINES

This type of machine looks just like the soda machine you put money into and a soda can drops out, except the "reverse" happens. You place your empty aluminum can in and out pops money or tokens that can be exchanged for money. Some reverse vending machines accept glass and plastic in addition to aluminum.

RECYCLING CENTERS, SCRAP METAL DEALERS, SALVAGE YARDS, THRIFT SHOPS

Most of these businesses accept a variety of materials. Usually, they do not accept unsorted items and are very specific about how you prepare the items. Often they pay you for what you recycle. Remember that reuse is a form of recycling.

INTEGRATION ACROSS THE CURRICULUM

The activities in this lesson help students develop critical thinking and analysis skills by examining how recycling occurs and discussing the various options for recycling within the community. Additional skills include:

- Language Arts: Reading, writing, vocabulary development, using reference materials to compile lists in cooperative learning groups.
- Mathematics: Using locations and mapping.
- Science: Recognizing the use of energy in recycling.
- Social Science: Understanding and using community resources, interpreting a local map, creating map legends, community service.

MATERIALS YOU WILL NEED

- Student Booklets
- Local telephone book advertising pages (several copies)
- Local city map(s)

VOCABULARY

Curbside Collection: Recyclable materials are placed at the curb for pick-up.

Recycling Center: A site where recyclable materials can be taken.

REVIEW

Review the steps in the recycling loop as described in the previous lesson. Point out that the roles of shopkeeper, shopper, recycler, and trucker can be found in the students' community. Although communities may not have a soft drink bottler or can manufacturer, the products from these factories are available.

ACTIVITY - Local Collection of Recyclables

In Lessons Six and Seven, students learned what and why to recycle. Here, they will learn how to recycle. Ask them to turn to Page 12 of their booklets. Discuss recycling pick up services offered in your community. Ask students if they know...

- where the materials are picked up (e.g., placed on the curb)
- how many containers are provided for the recyclables
- what goes in the containers
- when the containers are picked up

Discuss any special rules and guidelines applicable in your community. Knowing what *not* to put into the recycling containers is just as important as knowing what should go in them. Hazardous items such as paint and paint thinner, batteries, and motor oil should not be put in recycling containers. Your community may have certain days set aside when these types of materials will be picked up or can be taken to a collection site where they will be prepared for recycling.

ACTIVITY - Our Recycling & Reuse Guide

Divide students up into six groups to compile a list of recycling centers and second-hand stores. To obtain this information, look in the advertising pages of the telephone book under the headings below. Your local telephone book may also have a special section for recycling services.

1) Junk Dealers
2) Recycling Centers
3) Salvage
4) Scrap Metal
5) Thrift Shops
6) Waste Paper

List the name, address, and telephone number. Often, businesses list ads providing additional useful information. If the business lists what items it accepts, add this information to your list, too.

Combine the groups' efforts into a Class Recycling & Reuse Guide. The Guide can be reproduced and sent home.

ACTIVITY - The Recycle Map

Using a local map, first mark the location of your school. Then mark the locations of the junk dealers, recycling centers, salvage yards, scrap metal, thrift shops, and waste paper organizations from the Class Recycling & Reuse Guide. Give each type of business a separate symbol. Include a legend to tell what each symbol means. This activity can be adapted to accommodate small working groups of students: Separate the class into small groups, supply each group with the same community map, and complete the activity.

EVALUATION CHECKLIST

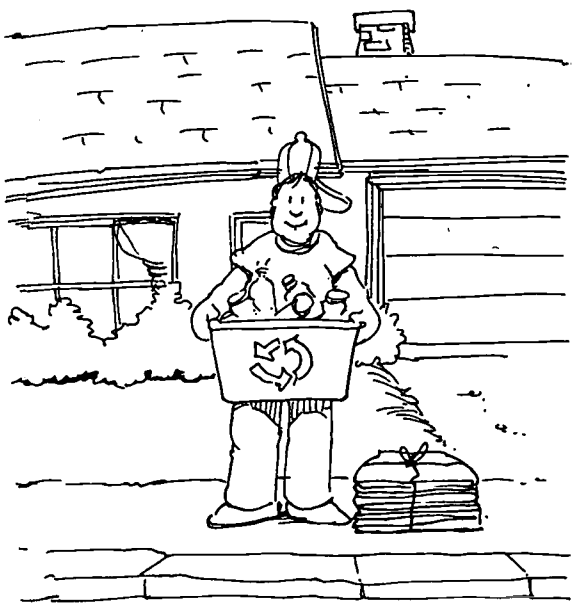
Are the students able to...

- name a method they can use to recycle?
- identify which materials they can recycle?

PREPARATION FOR NEXT LESSON

To conduct Lesson Nine activities, you will need the following:

- A rinsed 1-gallon plastic milk container and enough garden soil (not potting soil) to fill the container to a depth of two or three inches
- Yard waste (grass clippings, weeds, wilted flowers, tree leaves and twigs) and kitchen scraps



LESSON NINE: COMPOST IT

PURPOSE

In this lesson, students learn about another way to reduce the amount of trash: composting. They discover how nature recycles nutrients and how they can assist this process.

BACKGROUND

Composting is the process of letting nature turn yard waste and food waste into a rich soil additive called compost. Composting reduces trash by recycling nutrients back into soil and plant life.

In many communities, yard waste and food waste account for more than 25% of what we throw into landfills. Composting reduces landfill waste and increases the fertility of our soil. Organic materials contain many of the nutrients that plants draw from the earth. Composting helps return these nutrients to the soil.

INTEGRATION ACROSS THE CURRICULUM

The activities in this lesson help students develop critical thinking and analysis skills by examining and discussing the relationship between the earth and its resources. Additional skills include:

- Language Arts: Listening to a story, comprehending the story, vocabulary development, reading instructions.
- Mathematics: Using proportions.
- Science: Participating individually and as a group to help nature recycle its resources, decomposition, chemistry and biology, classification of organisms.
- Social Science: Understanding life cycles and equilibrium in nature.

MATERIALS YOU WILL NEED

- Student Booklets
- A rinsed 1-gallon plastic milk container and enough garden soil (not potting soil) to fill the container to a depth of two or three inches.
- Yard waste (see definition below) and kitchen scraps

VOCABULARY

Compost: A mixture of organic waste that changes into rich, healthy soil additives for plants to help them grow. Compost is used to add nutrients back into the soil and improve the soil's ability to hold both air and water.

Composting: The natural process of decomposition into a rich soil additive known as compost.

Compost Pile: The heap formed by layering compost materials on top of each other.

Decompose: To break down into basic elements, to decay or rot.

Nutrient: Something that promotes growth, such as a vitamin or food.

Organic: Something made from living, natural things such as plants and animals. Organic substances include leaves, wool, skin, fruit, vegetables, and hair.

Organism: Any living thing.

Yard Waste: Grass clippings, weeds, wilted flowers, tree leaves, and twigs.

REVIEW

Lessons Six through Eight discussed recycling and conserving natural resources. This lesson describes how nature recycles its nutrients and how organisms work together to obtain the nutrients they need to live. The result is that the organic materials decompose into compost.

Refresh students' knowledge about recycling and the earth's resources with the following questions:

- What is recycling? What does the earth recycle without our help?
- What is reuse? How does the earth reuse its "waste"?

ACTIVITY - Earth Day Cakes

Ask students to turn to Page 13 of their booklets. Read the "Earth Day Cakes" story aloud to introduce composting. (You will find the story at the end of this lesson.)

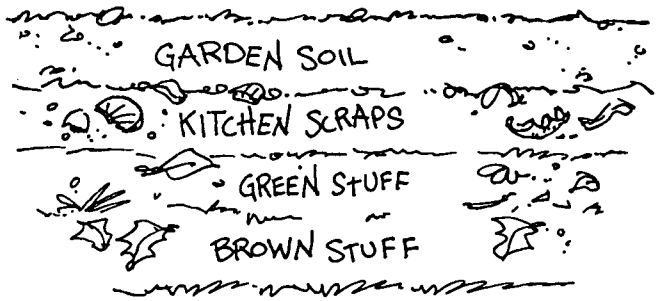
As a follow-up to this story, point out that...

- The real name for an "Earth Day Cake" is "compost pile."
- Leaves, grass clippings, and other yard waste fill up our landfills.
- Nature can recycle leaves, grass clippings, and other yard waste by creating compost—a valuable material that enriches the soil. Compost is to plants what vitamins are to people.
- Everyone can make a compost pile.

ACTIVITY - The Earth Day Cake Recipe

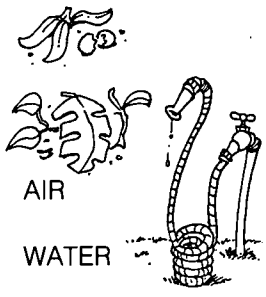
The Recycle Team talked about brown and green ingredients for a compost pile. Write the words BROWN and GREEN on the chalkboard, then read each of the items below (in random order). Ask the students to help the Team sort these composting ingredients so they can be written under the "brown" and "green" headings.

BROWN		GREEN
dry leaves	wood chips	fresh grass clippings
stems	sawdust	fresh leaves
straw	twigs	fresh weeds



Write the other ingredients on the chalkboard and discuss the role each one plays in the composting process.

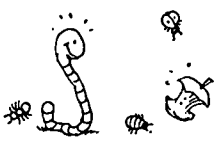
KITCHEN SCRAPS add nutrients to the pile (examples: lettuce, carrot tops, apple cores, celery, stale and moldy bread, pasta, eggshells, and coffee grounds). Note: kitchen scraps are for home composting only, not for curbside collection programs.



AIR helps organisms breathe and keeps the pile odor-free

WATER is the home for the organisms that do the work of composting

ORGANISMS in garden soil is the way that the compost pile obtains many of the necessary bacteria, fungi, microbes, molds, insects, worms, and ants. These organisms break down the plant waste by eating it.



Now that everyone knows the ingredients, describe how to mix them together.

1. Layer brown materials first to absorb moisture at the bottom of the heap.
2. Then layer green materials.
3. Add a small amount of soil.
4. Add enough water so that the material feels similar to a squeezed-out sponge.
5. Make sure air can get to the pile and that there is drainage for the excess water.
6. To speed the process, toss the materials (like you would a big salad) every 3-7 days.

Add new waste materials at any time. Place the materials in the center of the pile, then cover with leaves, straw, compost, or garden soil.

ACTIVITY - Composting in a Milk Carton

This science demonstration shows students how compost piles are constructed and demonstrates what happens as a result of the composting process. It takes at least two weeks to observe the composting process.

1. Take a clean, rinsed 1-gallon plastic milk container, and cut off the top to make a container for stirring and viewing what's inside. Poke pin-holes in the bottom for drainage.
2. Place a two-inch layer of garden soil (not potting soil) on the bottom of the container.
3. Add a thin "brown" layer with items like small twigs (nothing larger around than a pencil), dry leaves, and fruit and vegetable peels.
4. Add a "green" layer with items like lettuce, celery leaves, and fresh grass.
5. Add a half-inch layer of garden soil.
6. Cover to retain moisture and keep away pests.
7. After about a week, turn with a spoon and add water if necessary.
8. You might even add a few earthworms!

Students can bring in ingredients to add to the milk carton.

Maintain and observe the compost process for the next 2-4 weeks. Then follow up with the students analyzing what materials decomposed first, last, or not at all. Ask students to discuss their observations.

HELPFUL HINTS FOR COMPOSTING

- Avoid lining the pile in plastic. This makes it harder for the compost to breathe.
- Add grass in thin layers so it doesn't clump together.
- Cover kitchen scraps with a layer of leaves, grass, or dirt.
- Strong odors mean too much green material and lack of air circulation within the compost.
- There are a lot of ways to spice up your compost, but please don't add...
  - —Pet waste: it may have disease-carrying organisms.
  - —Meat, bones, and milk products: they attract pests and create odor.
  - —Clippings from grass or plants that have been sprayed with weed killers.

EVALUATION CHECKLIST

Are students able to...

- explain how nature recycles nutrients?
- name the necessary ingredients in a compost pile?
- describe how to make a compost pile?

STORY FOR LESSON NINE: EARTH DAY CAKES

The story begins with three of the Recycle Team members spending time at some of their favorite activities. Benny Bear is busy at a fruit and vegetable stand. Gilda Fish is working in her garden, and Danny Duck is playing Cowboy Danny today, working with all of the horses and hay on his ranch. However, they are experiencing one common problem: they all find that they have created lots of waste doing some of their favorite things. Benny didn't sell some of his fruit and vegetables, and they are beginning to rot. Gilda had lots of leaves and grass clippings from all of her hard work, and Danny found that horses do what they do best on the straw in their stalls (and just guess whose job it was to clean the stalls out!)

As they were each wondering what to do with the various types of trash they had made, Sammy Slaptail drove down the street. He was excited to see the piles of trash which his friends had made. He eagerly, as beavers do, asked each of them if he could have what they were about to throw away. They looked at him with puzzled faces because they couldn't imagine what he wanted with all of this stuff, but they were more than happy to say yes.

This went on for several weekends in a row. Finally, the three friends were beginning to wonder what Sammy was doing with all of the waste. Sammy's place was on the other side of the hill by the stream, and as they approached the top, they noticed what appeared to be a column of smoke. They were afraid that Sammy was burning the stuff, so they all dashed down the hillside to stop him.

They nearly collided with Sammy, who was wearing a baker's hat and holding a pitchfork. Out of breath, they tried to tell Sammy that he shouldn't be burning the yard trimmings, rotting food, and straw, and then they looked around. He wasn't burning anything. They noticed tidy dirt and straw stacks alongside of plastic and wooden boxes. They asked Sammy what he was doing. He told them that he was doing experiments making Earth Day Cakes.

Now they were really confused. Sammy explained that making real cakes required a recipe and ingredients such as flour, eggs, sugar, and oil. Making Earth Day Cakes required brown materials, green materials, air, water, and a few food scraps. The other difference was that Earth Day Cakes baked from the inside out. (The smoke was really steam rising from the cakes.) They didn't need to be put into ovens like regular cakes. By this time, Benny was getting hungry, with all of this talk about food, and wanted to see a finished Earth Day Cake.

So Sammy proudly took them over to a big wooden box. They looked inside and couldn't believe their eyes. Dirt! He was showing them a box full of dirt. Danny got mad (he figured it was another dirty trick!) and Benny lost his appetite.

Sammy explained that this was not an ordinary pile of dirt. It was rich, dark compost that could be added to soil to help trees, plants, and vegetables grow. Compost came from all of the leaves, food scraps, straw, and horse manure which had decomposed.

He then went on to explain that all of the different boxes and piles were different ways of composting the materials which his friends had given him. Some things needed more turning, or "stirring," than others, some took longer to "bake," but they all shrank as they cooked, unlike real cakes. So this was a perfect way to get rid of a lot of their wastes and make something useful at the same time.

Benny thought it was a great idea and said that's probably what happens to all the stuff in a landfill; after all, a landfill was a big pile of much of the same stuff. Sammy shook his head. Landfills were much too big, he said, and the air and water couldn't get to the bottom layers. Besides, some things like plastics and metals can't be composted. So all of this stuff just takes up space in our landfills.

However, Sammy did go on to tell them that some cities do collect all of their yard wastes and grass clippings to make giant piles of compost. But they can't collect the food scraps because they rot too fast, and that attracts rats and flies. So composting at home is another great way to "recycle" leaves, grass, foods scraps, and even small amounts of paper such as napkins and pieces of brown paper bags.

After having lunch at Sammy's place, the Recycle Team all headed for home with smiles and piles of compost. Benny mixed his compost into the soil to grow fruits and vegetables, Gilda used hers in her garden, and Danny used some on the hay field where his horses grazed.

LESSON TEN: JOIN THE RECYCLE TEAM

PURPOSE

In this lesson, students are given the opportunity to review, discuss, and apply what they have learned in the previous lessons.

BACKGROUND INFORMATION

In the previous nine lessons, students have learned that there is too much waste, and that we can reduce waste by smart shopping, reusing, recycling, and composting. Students now have the knowledge and motivation to join the Recycle Team in helping to save our environment.

INTEGRATION ACROSS THE CURRICULUM

The activities in this lesson help students develop critical thinking and analysis skills by assimilating the information from the previous lessons. Additional skills include:

- Language Arts: Following oral and written game directions, using reference materials to obtain information, formulating and sharing ideas.
- Mathematics: Classifying objects in a game according to specific attributes, using logic and problem-solving.
- Science: Organizing and classifying objects according to waste reduction techniques, understanding how waste reduction helps humans, animals, and the environment.
- Social Science: Devising and choosing solutions, demonstrating respect for others when participating in group activities, cooperating with others by setting goals for group work, community service.

MATERIALS YOU WILL NEED

- Student Booklets
- Down in the Dumps Game

VOCABULARY

Commitment: A promise to complete a course of action.
Pledge: To make a promise.

REVIEW - Recyclopedia

This activity reviews the content of the previous lessons and prepares students for the Down in The Dumps game.

Ask students to turn to Page 14 of their student booklets. Tell them that they will be completing their own "Recyclopedia." The Recyclopedia is a list of items that should not be considered trash after their first use. The items are either recyclable, reusable, or compostable. Each item listed in the Recyclopedia falls under at least one of these three categories.

As a class, discuss and decide which items are recyclable, reusable, or compostable. Place an "X" in the appropriate column for each item. A completed Recyclopedia is packaged with the game for reference. The Recyclopedia will also be the "key" for the Down in The Dumps game.

☆ ACTIVITY - Down in the Dumps

Choose four students at a time to play the Down in The Dumps board game while the rest of the class works on other activities described below. (You may place a time limit of 15 minutes on the board game or let students play until the first player runs out of cards.) Rotate the groups between the game and the activities.

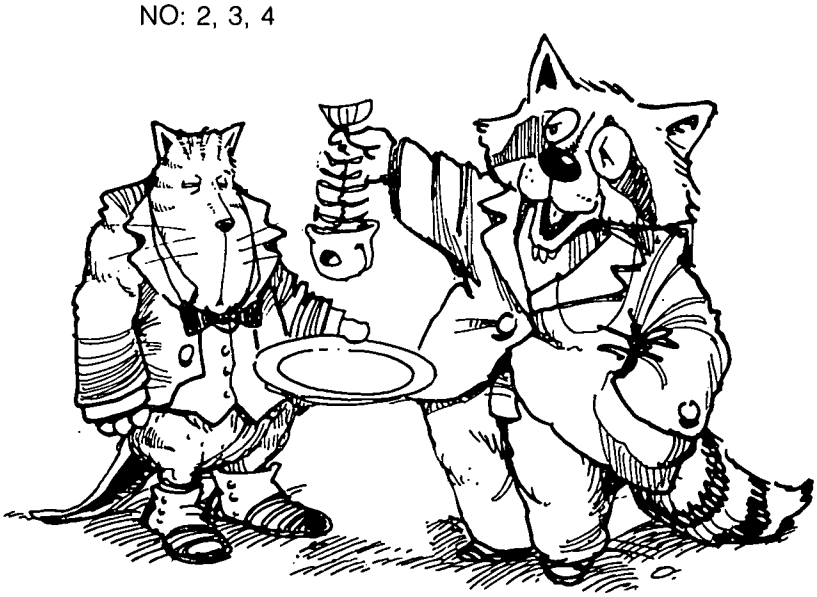
PLAY THE DOWN IN THE DUMPS GAME

Students join the Recycle Team to see how much they have learned about managing waste. This game can be played any time after the first nine lessons have been completed. Refer to the game directions packaged with the board game.

TAKE THE TRASHOLOGIST SURVEY

Have the students take the Trashologist Survey on Page 15 of their student booklets. Tell them they are taking the survey to see how much they've learned about the subject of trash. After the survey has been completed, place students into small groups and ask them to compare answers. If necessary, help groups reach a consensus. The answers to the Trashologist survey are:

YES: 1, 5, 6, 7, 8, 9
NO: 2, 3, 4



WRITE A LETTER TO YOUR PARENTS

Have the students write a letter to take home to their parents explaining what they have learned from the Recycle Team lessons. Remember to use scratch paper from the class reuse box for first drafts. Encourage them to describe the personalities of the Recycle Team characters and how the proper management of waste helps people, animals, and the earth as well. Write the ten lesson headings from your Teacher Guide on the board to get them started. Encourage them to refer to their student booklets for ideas.

DESIGN A "HOW TO RECYCLE" FLYER

Students can design and create a flyer that instructs others on how and where to recycle. Include pointers on how to be a "smart shopper" and reminders on how to "reuse it first." Use paper from your reuse box for practice. Students could refer to their Recyclopedias and student booklets for ideas. Take the flyer home and share it with others or post it at school.

ACTIVITY - The Recycle Team Pledge

Discuss the meaning of commitment. By now, students have learned all about ways to reduce trash: smart shopping, reusing, recycling, and composting. Brainstorm with your students ways they can make a personal commitment to help the Recycle Team.

Divide the class into four groups. Each group will represent a Recycle Team character (Benny, Sammy, Gilda, Danny). Have each group select a Spokesperson and a Recorder. The task for each group is to create a section of the "Recycle Team Pledge" for the class as a whole.

Gilda's group will write the SMART SHOPPING portion
Benny's group will write the REUSE portion
Sammy's group will write the RECYCLE portion
Danny's group will write the COMPOST portion

Each group decides what its role will be in meeting the goal of proper trash management. The Recorder will write down the suggestions and the Spokesperson will share the ideas with the rest of the class. Have the groups use their student booklets for reference.

After the four groups have shared their ideas with the rest of the class, combine the ideas into a "Recycle Team Pledge" to post in the classroom. Ask students to turn to the back cover of their booklets and fill in their names. Congratulate the students for their teamwork. They are now official members of the Recycle Team!

CONTINUATION OF PREVIOUS LESSONS

Encourage students to continue to practice what they have learned about smart shopping, reusing items, recycling, and, if possible, composting. They should share what they have learned with friends and family.

EVALUATION CHECKLIST

Are the students able to...

- complete the Recyclopedia?
- write personal commitments for a Recycle Team pledge?

This is the completion of the Recycle Team lessons, but just the beginning of what we hope will be a lifelong habit of taking care of our environment.

APPENDIX A: STUDENT MATERIALS

The following pages may be reproduced for use by students.

Animal Masks Pages 30-33

In the Lesson One story, students can sing the "Recycle Song," taking the roles of Danny Duck, Benny Bear, Sammy Slaptail, and Gilda Fish. Using these masks can add to the fun.

- Copy the masks onto card stock.
- Have the students cut them out, color them, and tape them on an ice cream stick or unsharpened pencil.
- Have each group rehearse their parts before the performance.

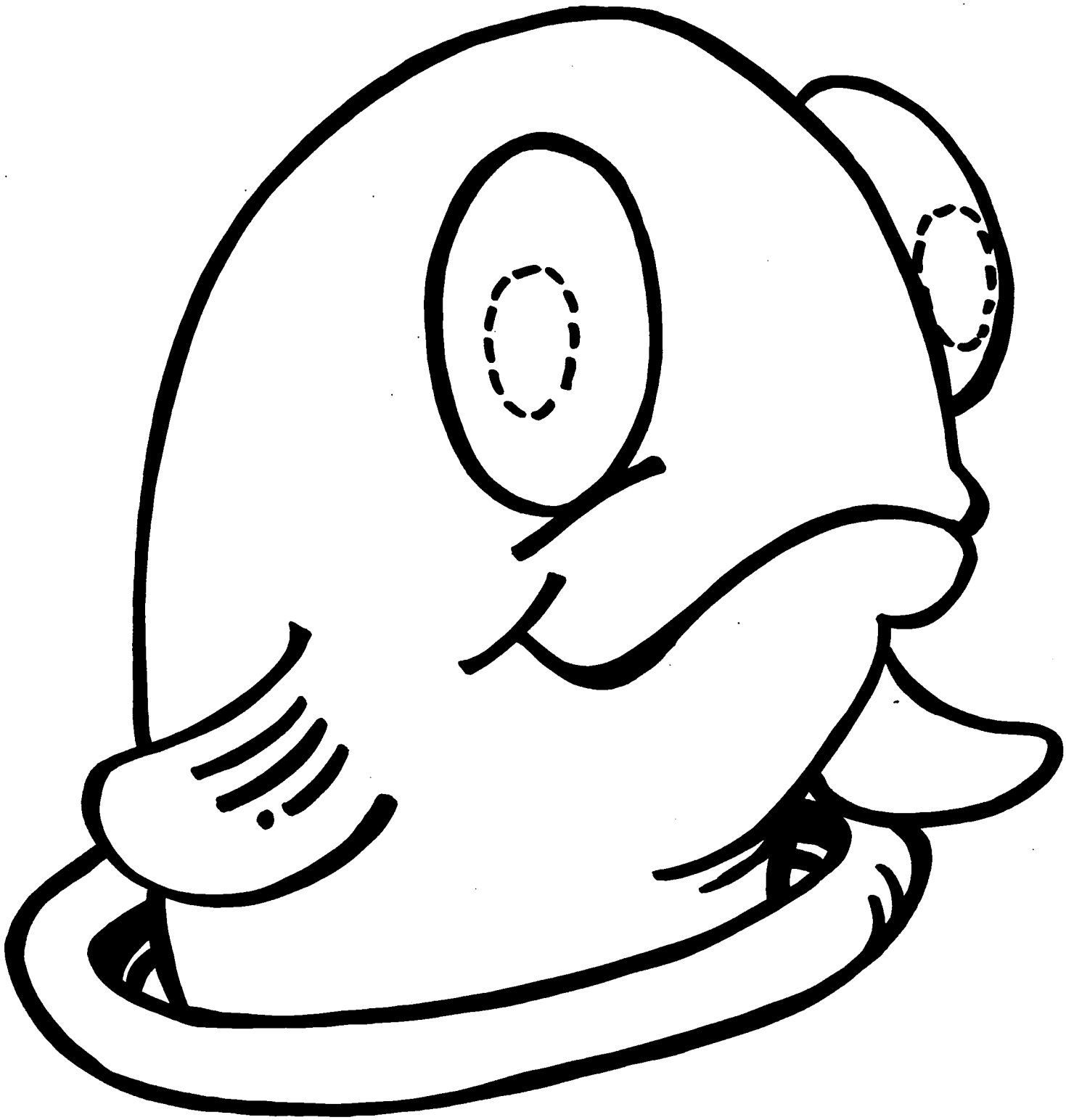
Recycle Song Page 34

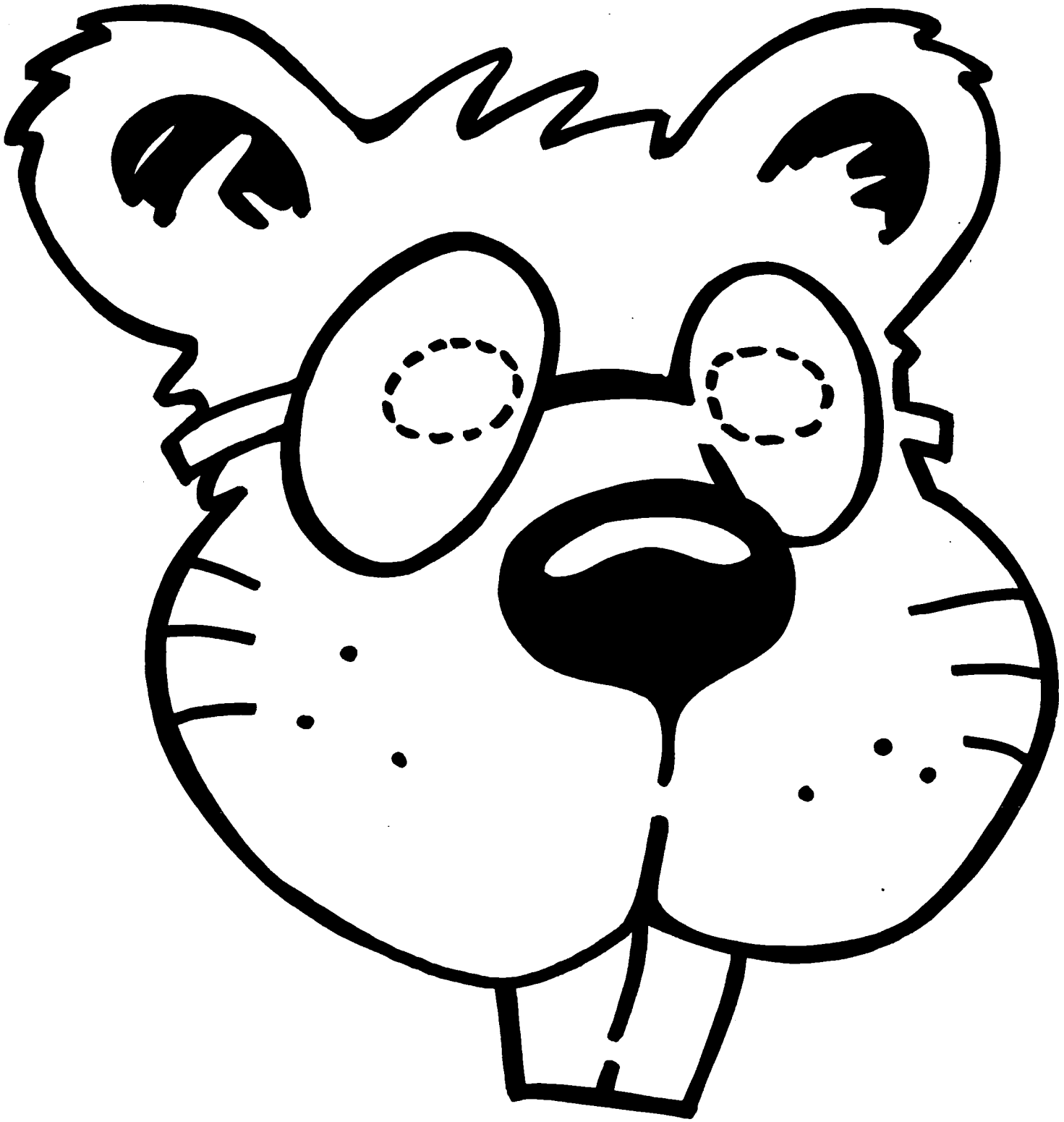
The lyrics of this song can be reproduced for students who are singing.

Student Booklet Pages Pages 35-39

If you do not want students to mark in the Student Booklet, reproduce and distribute these pages.

32





THE RECYCLE SONG
As sung by the Recycle Team

Dumpmeister:

We've got a problem, boys and girls, that speaks of doom and gloom!
We're throwin' so much stuff away, we're running out of room.
Now, just because you threw it out, it hasn't disappeared—
It's sitting in the landfill for a couple hundred years!

Fish:

Now cans are made of metal, and bottles made of glass,
And plastic jugs are made of stuff that's being used up fast.
All of Nature's gifts, my friends, like time which passes on,
Cannot be replaced, you know; once they're gone, THEY'RE GONE!

Chorus (sung by all):

So have a clue, and help the earth! Now don't you be a chump!
If you know it can be used again, don't send it to the dump!

Duck:

Now take this glass container, once full of Perrier:
Recycle it so it can live to see another day!
Just empty it and rinse it out and put in the bin.
They'll break it up and melt it down and make it new again.

Beaver:

And here's a plastic bottle—it's a miracle of man.
There's millions in the landfills from Detroit to Hindustan.
So wash 'em and recycle 'em into something new:
A comb, a pot, a plastic bird, a styrofoam canoe.

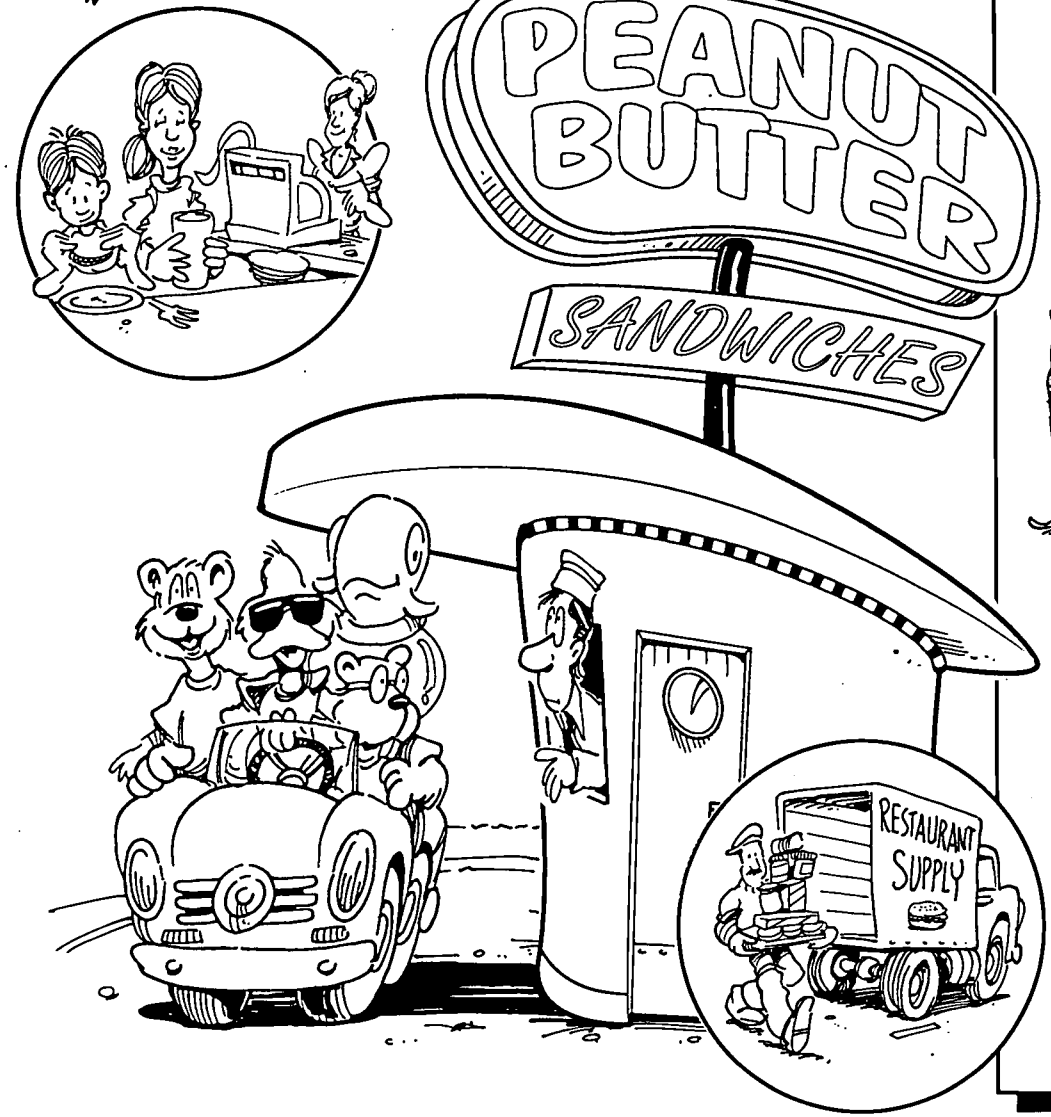
Bear:

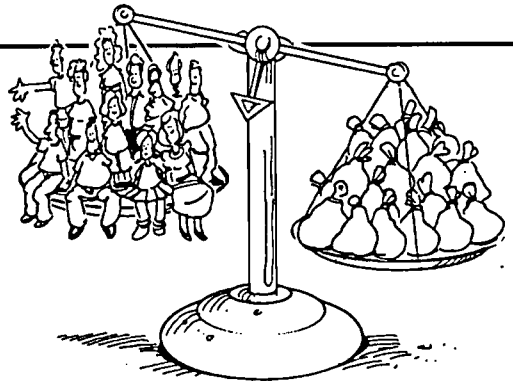
And now a can of soda pop, aluminum—you bet!
To throw it in a landfill—how stupid can you get?!
Now this should be recycled—a brand new can comes out.
To save our precious resources—that's what it's ALL about.

Entire Group:

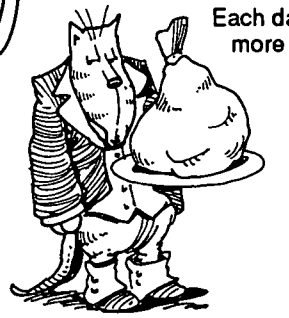
Well, now you know it's no big deal to beat this bogeyman,
If everyone does something to recycle what they can.
So have a clue, and help the earth! Now don't you be a chump!
If you know it can be used again, don't send it to the dump!

TRASH TO GO





FALSTAFF'S FAMILY FACTS



Each day the average American generates more than 3 lbs. of household trash.

ONE PERSON	
ONE DAY	3 LBS.
ONE WEEK	21 LBS.
ONE MONTH	93 LBS.
ONE YEAR	1095LBS.

To find how much trash your family generates, put the number of family members (including you) in the yellow box and multiply across.

NUMBER OF PEOPLE IN YOUR FAMILY

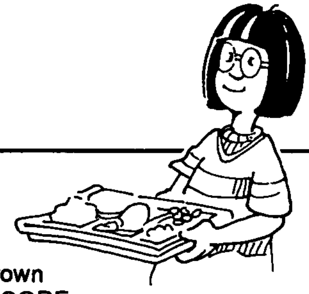
x 3 = _____ LBS. IN ONE DAY

x 21 = _____ LBS. IN ONE WEEK

x 93 = _____ LBS. IN ONE MONTH

x 1095 = _____ LBS. IN ONE YEAR

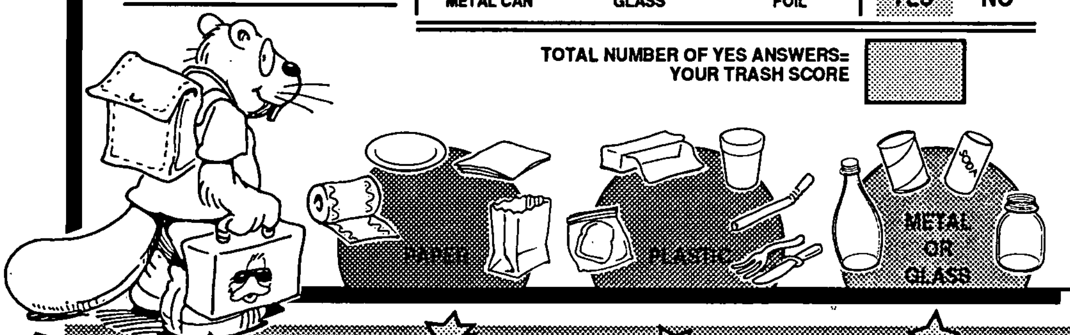
LET'S DO LUNCH

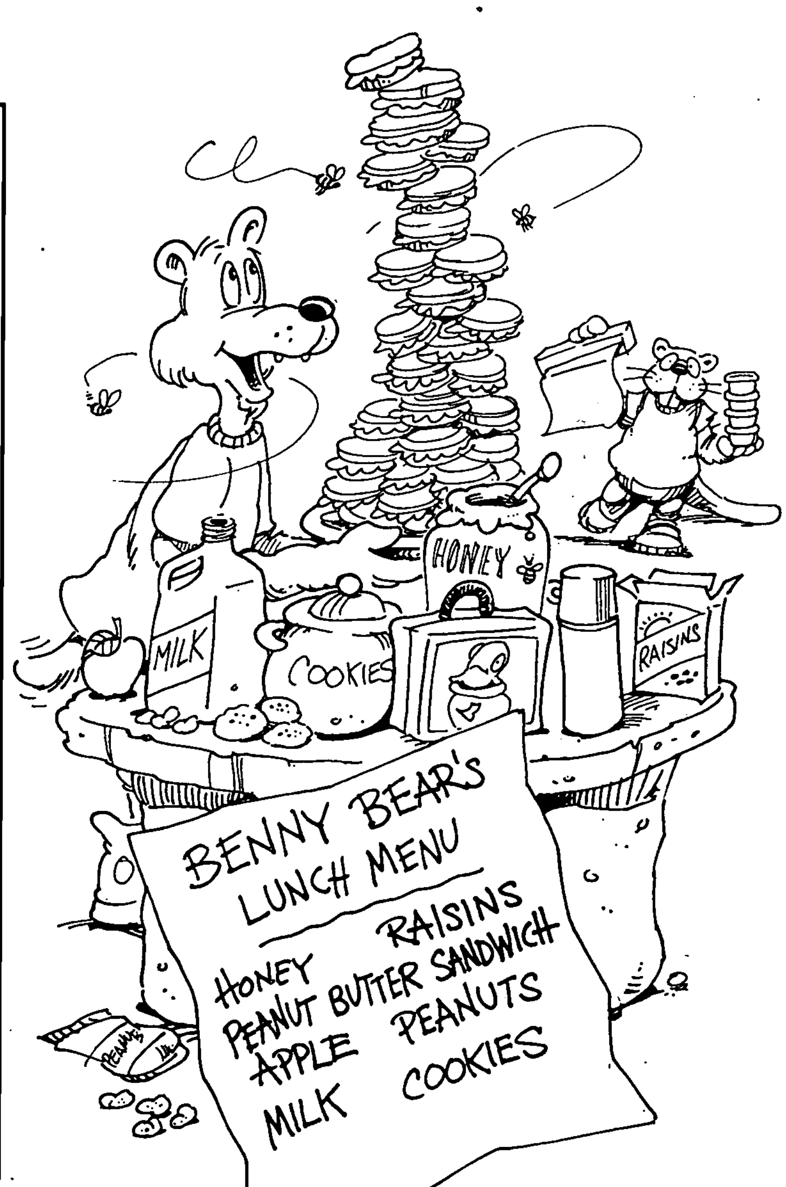


LUNCH TRASH SURVEY: List all of the items in your lunch and circle the type of packaging material used for each item. Don't forget to list lunch bags, napkins, utensils and drink containers. Circle YES if the packaging will be thrown away. Then add your YES answers to get YOUR TRASH SCORE.

Write your lunch items here.	Circle how each item is wrapped or served.			Will it be thrown away?	
______	PAPER / METAL CAN	WAX PAPER / GLASS	PLASTIC / FOIL	YES	NO
______	PAPER / METAL CAN	WAX PAPER / GLASS	PLASTIC / FOIL	YES	NO
______	PAPER / METAL CAN	WAX PAPER / GLASS	PLASTIC / FOIL	YES	NO
______	PAPER / METAL CAN	WAX PAPER / GLASS	PLASTIC / FOIL	YES	NO
______	PAPER / METAL CAN	WAX PAPER / GLASS	PLASTIC / FOIL	YES	NO
______	PAPER / METAL CAN	WAX PAPER / GLASS	PLASTIC / FOIL	YES	NO
______	PAPER / METAL CAN	WAX PAPER / GLASS	PLASTIC / FOIL	YES	NO
______	PAPER / METAL CAN	WAX PAPER / GLASS	PLASTIC / FOIL	YES	NO
______	PAPER / METAL CAN	WAX PAPER / GLASS	PLASTIC / FOIL	YES	NO

TOTAL NUMBER OF YES ANSWERS= YOUR TRASH SCORE ______

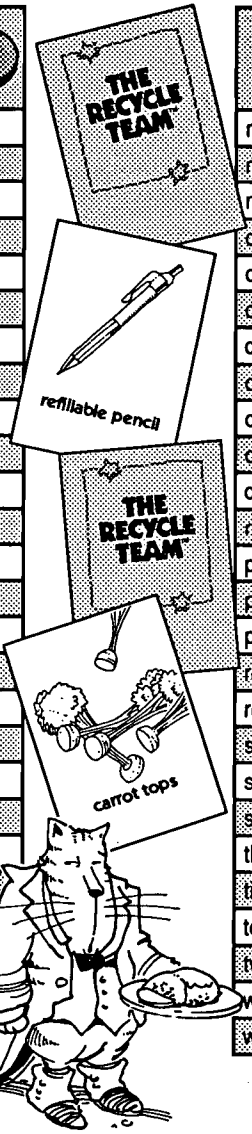




BEST COPY AVAILABLE

MAKE YOUR OWN RECYCLOPEDIA

TRASH CARD	RECYCLE	REUSE	HOW?	COMPOST
aluminum foil				
apple core				
banana peels				
book				
bows & wrappings				
can of paint				
cardboard box				
carrot tops				
Christmas tree				
cloth bag				
cloth diaper				
coffee can				
coffee grounds				
cola can				
computer paper				
corn cob				
dead flowers				
eggshells				
glass juice bottle				
glass soda bottle				
grass clippings				
junk mail				
leaves				
lunch bag (paper)				
magazines				
margarine tub				



TRASH CARD	RECYCLE	REUSE	HOW?	COMPOST
motor oil				
mug				
newspapers				
oatmeal container				
old celery				
old paint				
old toothbrush				
orange peels				
outgrown shoes				
outgrown sweater				
outgrown toy(roller skates)				
notebook paper				
phone book				
plastic soda bottle				
potato peels				
rechargeable batteries				
refillable pencil				
sawdust				
soup can				
sponge				
thermos				
tires				
towel				
twigs				
water bottle				
watermelon rinds				

TRASHOLOGIST SURVEY

TRASH-OL-O-GIST:

A person who studies trash and knows how to manage waste properly.
("ologist" at the end of the word means "a person who studies.")

A good trashologist is ready to tackle these statements.

How good a trashologist are you?

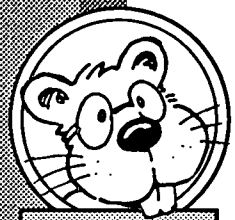
Circle YES or NO.

1.	I look for ways to keep useful items from being thrown away.	YES NO
2.	I throw out trash anywhere because someone else will clean it up for me.	YES NO
3.	The only thing to do with trash is to burn it.	YES NO
4.	I buy things wrapped in several layers of paper or plastic to get my money's worth.	YES NO
5.	I try to reuse things before throwing them away.	YES NO
6.	I recycle to help save our natural resources.	YES NO
7.	It's important to buy things made from recycled materials.	YES NO
8.	Grass clippings can be added to a compost pile.	YES NO
9.	I can make a difference in helping to protect our environment.	YES NO

RECYCLE TEAM™ MEMBER

BENNY THINKS YOU'RE **THE BEST!**

THIS CERTIFIES THAT

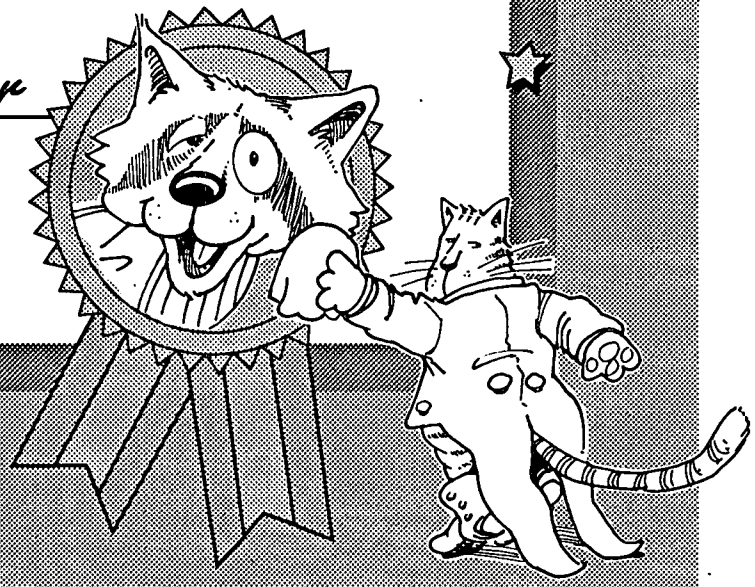


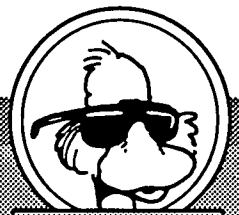
SAMMY THINKS YOU'RE **SUPER!**

IS AN OFFICIAL MEMBER OF

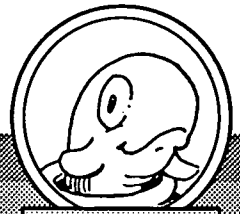
THE RECYCLE TEAM™

R. Raccoon, The Dumpmeister





DANNY THINKS YOU'RE **DYNAMITE!**



GILDA THINKS YOU'RE **GREAT!**

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APPENDIX B: SPANISH LANGUAGE MATERIALS

The following pages may be reproduced for use by parents and students.

Parent Leaflet Page 41

This leaflet tells parents that their child is learning about a serious problem... TRASH. It also states that the students and their families will learn about reducing the amount of waste by...

- recycling,
- reusing,
- buying products made from recycled materials,
- buying items without a lot of wasteful packaging, and
- composting.

Vocabulary Page 42-44

For each lesson, the key vocabulary words and their definitions are listed.

SU NIÑO(A) ESTA APRENDIENDO A PROTEGER EL AMBIENTE QUE LO(A) RODEA

¡USTED PUEDE AYUDAR!

Su niño(a) está aprendiendo acerca de un problema muy serio. La basura. Nuestro país está produciendo y tirando demasiada basura. Es muy costoso deshacerse de ella y se sigue amontonando en nuestros basureros. ¿Sabía usted que gran parte de nuestra basura puede utilizarse de nuevo?

Su niño(a) aprenderá que todos podemos reducir la cantidad de basura que producimos. He quí como:

- Reciclando papel, vidrio, productos de plástico y de metal.
- Utilizando artículos de nuevo, en lugar de tirarlos.
- Comprando artículos fabricados con materiales reciclables.
- Convirtiéndonos en "compradores inteligentes" -comprando artículos que no contengan empaquetado muy elaborado que desperdicie mucho material de empaque.
- Abonando la tierra con basura orgánica.
- Usted puede ayudar, preguntándole a su niño(a) de que manera puede ayudar toda la familia; reprocesando, utilizando artículos varias veces y convirtiéndonos en "compradores inteligentes."

GRUPO DE RECICLAJE LECCIÓN 1-10 VOCABULARIO

LECCIÓN 1

Desperdicio: Cualquier material considerado inútil, sin valor, innecesario u ofensivo. Alimento hechado a perder o descompuesto que se tira.

Basura: Material seco, considerado sin valor, inútil, innecesario, u ofensivo, que por lo regular se tira a la basura. No es alimento o cenizas. El término se usa intercambiable con la palabra "desperdicio."

Material hechado a perder, desechado: Material que ha sido deshechado o tirado porque se ha gastado, ha sido utilizado, o porque ya no se necesita. Material para empacar, periódicos, papel para escribir usado, y utensilios quebrados que han sido clasificados como deshechables.

LECCIÓN 2

Medio Ambiente: Nuestro alrededor. Todó lo que nos rodea. Como el agua, el oxígeno, el clima, el clima, la gente, las plantas y la tierra.

Impacto Ambiental: Los efectos que tienen las cosas en el medio ambiente. Toda actividad humana causa algunos cambios en nuestro ambiente.

LECCIÓN 3

Basurero Público: Lugar a donde se lleva la basura a tirar. En basureros santiarios, la basura se cubre con capas de tierra u otros materiales tratados especialmente para este propósito.

Incinerador: Un horno en el cual se queman materiales para reducir a cenizas (y que son llevadas al basurero público), y por lo tanto se disminuye el tamaño de lo que se pretende tirar o descartar. El calor de algunos incineradores es utilizado para generar electricidad.

LECCIÓN 4

"Comprador inteligente": Una persona consciente de cómo sus compras o lo que consume afectarán el ambiente, y que hace decisiones inteligentes al comprar productos.

Materiales de Empaque: Materiales para empaquetar productos. Plástico, aluminio, cartón, polietileno espuma son materiales típicos de empaque. Algunos de éstos son reciclables.

Producto: Algo que es hecho o creado. Juguetes, algunos alimentos, papel, y muebles son todos productos.

Tóxico: Venenoso o nocivo.

LECCIÓN 5
Aluminio: Un metal duro, plateado, hecho del mineral bauxite. Las latas hechas de aluminio son fácil de compresar, no tienen línea de unión (costura) en un lado, (compare esto a una lata de sopa, que está hecha de acero y tiene unión,) y que generalmente contienen bebidas.

Utilizar de nuevo: Uso repetido de un producto en su forma original. Por ejemplo, una caja de zapatos contiene zapatos y puede ser utilizada de nuevo para guardar cartas de beisbol.

LECCIÓN 6
Conservar: El cuidado, protección, o uso prudente de nuestros recursos naturales.

Reciclando: Coleccionar y hacer nuevos productos de materiales usados, tales como aluminio usado, vidrio, plástico y papel, para utilizarlos en la fabricación de nuevos productos.

Recursos Naturales: Materiales que se encuentran en la naturaleza que son utilizados para vivir. Arboles, tierra, minerales, y animales son recursos naturales.

Manufacturar: Fabricar un producto.

Mineral: Un recurso natural tomado de la tierra, para utilizarlo en la creación de metal u otros objectos. Piedra, carbón, hierro y el mineral aluminio son ejemplos de minerales.

Producto: Algo hecho por la naturaleza o la industria. Algunos ejemplos de productos fabricados de recursos naturales son las latas de aluminio, los envases de vidrio para jugo, papel para escribir.

LECCIÓN 7
El Círculo del Reciclaje: El ciclo continuo de recursos naturales y productos cuando ocurre el reciclaje. El ciclo contiene los siguientes pasos:

- Se utiliza el producto.
- Después de utilizarse, el producto es entregado a alguien que lo reciclará.
- El producto es remanufacturado (cortado, compresado, derretido, etc.) en un nuevo producto.
- El nuevo producto, hecho de un material reciclado, es comprado.
- El producto es utilizado.

LECCIÓN 8
Colecta de curva: Materiales de reciclaje son puestos en la banqueta para que sean recogidos.

Centro de Reciclaje: Sitio al cual se llevan artículos para reciclar.

LECCIÓN 9

Abono: Es una combinación de desperdicio orgánico que cambia a un aditivo saludable para ayudar a las plantas a crecer. El abono se utiliza para añadir nutrientes a la tierra y mejorar su habilidad para retener oxígeno y agua.

Abonando: El proceso natural de descomposición a un aditivo que enriquece la tierra, conocido como abono.

Montón de Abono: El montón que se forma al poner una capa de abono encima de otra.

Descomponerse: Deshacerse en sus elementos básicos, destruírse, o podrirse.

Nutriente: Algo que ayuda al crecimiento, como las vitaminas o el alimento.

Orgánico: Algo hecho de elementos naturales, vivos, como las plantas y animales. Substancias orgánicas que incluyen hojas, lana, piel, frutas, vegetales y pelo.

Organismo: Cualquier cosa con vida.

Desperdicios de Patio de Casa: Recorte de césped, hierba, flores marchitas, hojas de árbol y ramas.

LECCIÓN 10

Compromiso: Una promesa de completar una acción.

Promesa: Hacer una promesa formal.

Your child is learning about a serious problem... IT'S TRASH.

Our country is throwing away too much of it. It's expensive to get rid of and it's piling up in our landfills. Did you know that much of this trash could be put to good use instead?

Your child will learn that we all can reduce waste. Here's how:

- Recycle paper, glass, plastic and metal products
- Reuse items instead of throwing them away
- Buy products made from recycled materials
- Be a "smart shopper"— buy items without a lot of wasteful packaging
- Compost (You may not have heard much about this idea. The next few pages will tell you more.)

How can you help?

Ask your child how your family can recycle, reuse, and be smart shoppers.

Find out more about composting (see the recipe card for Earth Day Cakes inside).

Below is a list of kitchen scraps that are good for your cake. KEEP IT HANDY IN THE KITCHEN!

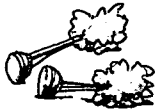
Eggshells

Lettuce

Celery

Coffee grounds

Carrot tops



Bread

Apple cores

Pasta

Your child is learning how to protect our environment...

YOU CAN HELP!

THE INGREDIENTS:

art with a wire
e, wooden box,
ommercial bin.

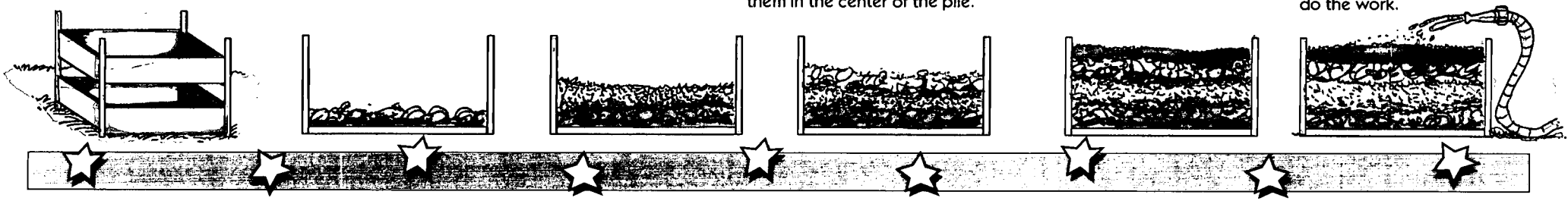
2. Add something brown (dry leaves or small twigs).

3. Then add something green (grass clippings or fresh leaves).

4. Add fruit and vegetable scraps such as lettuce, carrot tops, apple cores, and celery. Eggshells, coffee grounds, bread, and pasta are also good. Put them in the center of the pile.

5. Finish with a thin layer of garden soil.

6. Every few days, add enough water to keep it moist. This makes it a friendly home for the organisms that do the work.



TIRED OF MAKING THE SAME OLD RECIPES?

MAKE AN EARTH DAY CAKE!

Composting is the process of letting nature turn grass clippings, leaves, and other yard waste into a substance that enriches the soil. Compostable materials should feed the plants, not the landfills.

In many communities, yard and food wastes account for more than 25% of what we dump into landfills. Composting reduces landfill waste and increases the fertility of our soil.

Here is a recipe for creating your own compost, or Earth Day Cake. In a few months, you will have compost that can be added to the soil in your flower pots, garden, or yard.

Follow the steps above to start your own Earth Day Cake.

It cooks by itself!

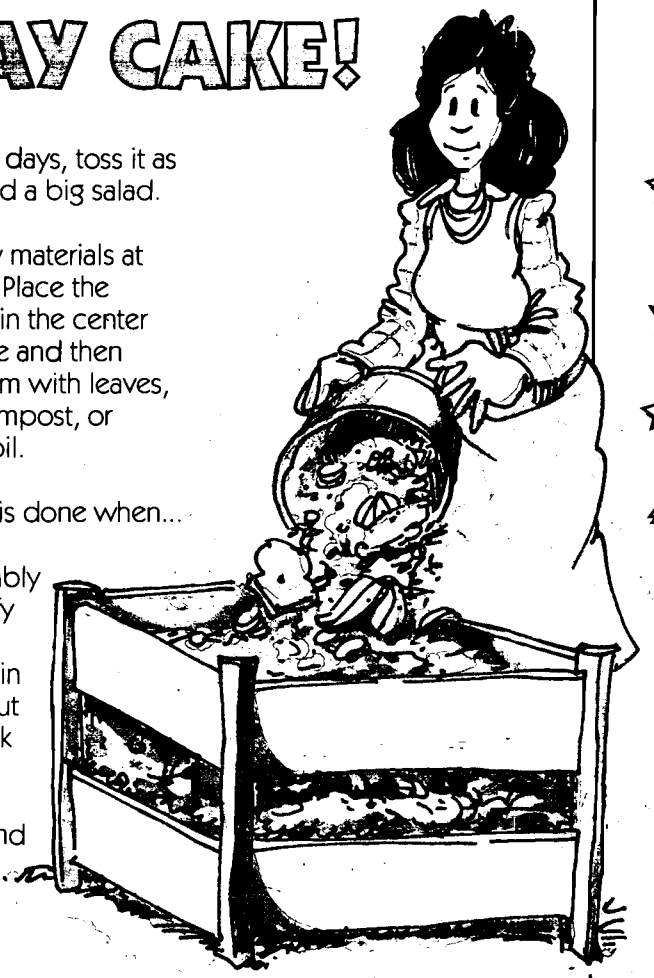
Make sure air can circulate through the pile and that there is drainage for excess water.

Every 3-7 days, toss it as you would a big salad.

Add new materials at any time. Place the materials in the center of the pile and then cover them with leaves, straw, compost, or garden soil.

The cake is done when...

- it's crumbly and fluffy
- it's dark in color, but not black
- it smells sweet and earthy



BON APPETIT!

HELPFUL HINTS FOR COMPOSTING

- Avoid lining the pile in plastic. This makes it harder for the compost to breathe.
- Add grass in thin layers so it doesn't clump together.
- Cover kitchen scraps with a layer of leaves, grass, or dirt.
- Strong odors mean too much green material and lack of air circulation within the compost.

There are a lot of ways to spice up your compost but please **don't** add...

- Pet waste: it may have disease-carrying organisms.
- Meat, bones, and milk products: they attract pests and create odor.
- Clippings from grass or plants that have been sprayed with weed killers.

RECYCLOPEDIA

TRASH CARD	RECYCLE	REUSE	HOW?	COMPOST
aluminum foil	X	X		
apple core				X
banana peels				X
book		X		
bows & wrappings		X		
can of paint	X	X		
cardboard box	X	X		
carrot tops				X
Christmas tree				X
cloth bag		X		
cloth diaper		X		
coffee can		X		
coffee grounds				X
cola can	X	X		
computer paper	X	X		
corn cob				X
dead flowers				X
eggshells				X
glass juice bottle	X	X		
glass soda bottle	X	X		
grass clippings				X
junk mail	X			
leaves				X
lunch bag	X	X		
magazines	X	X		
margarine tub	X	X		

TRASH CARD	RECYCLE	REUSE	HOW?	COMPOST
motor oil	X			
mug		X		
newspapers	X	X		
oatmeal container		X		
old celery				X
old paint	X	X		
old toothbrush		X		
orange peels				X
outgrown shoes		X		
outgrown sweater		X		
outgrown toy(roller skates)		X		
notebook paper	X	X		
phone book	X	X		
plastic soda bottle	X	X		
potato peels				X
rechargeable batteries	X	X		
refillable pencil		X		
sawdust				X
soup can	X	X		
sponge		X		
thermos		X		
tires	X	X		
towel		X		
twigs				X
water bottle		X		
watermelon rinds				X

DOWN IN THE DUMPS GAME

WHO WINS?

If you are the first player to get rid of all of your Trash cards—or—if you have the fewest number of Trash cards when the time is up, you win!

1. GET READY. . .

Cut the sheets of cards on the dotted lines. Glue the game markers onto coins. Sort the cards into two stacks: The blue Dumpmeister cards and the gold Trash cards.

Shuffle each stack.

Place the Dumpmeister stack face down in the center of the board.

Deal seven Trash cards to each player. Place the Trash stack face down next to the Dumpmeister stack. Place your Trash cards face up in front of you.

2. GET SET. . .

Select one of the six game markers. The Dumpmeister can be placed on any of the board's spaces with his picture. Place Falstaff on any compost space. Place the Recycle Team characters on the appropriate corner space.

Roll the die. The player who rolls the highest number plays first. In case of ties, roll again. Players take turns in a clockwise direction.

3. GO!

Roll the die and move your marker the same number of spaces in ***either direction.***

If you land on a REUSE space, pick a Trash card from your hand. Tell the other players how you can reuse that trash.

Or, if you land on a RECYCLE or COMPOST space, select a Trash card from your hand and tell how you can recycle or compost that trash.

If the other players agree that you can reuse, recycle, or compost the trash in this way, discard that Trash card face down in front of you and roll again. If the other players do not agree, keep the card and it's the next player's turn. Allow plenty of time for discussion and group problem-solving. If necessary, the Recyclopedia on the back of this page may be used to settle disputes.

If you can't play a card from your hand, draw a card from the Trash stack. It is then the next player's turn.

The corner spaces count as moves. If you land on a corner space, you can continue around the board or follow the arrow and jump across the board to the opposite corner space.

If you land on a Dumpmeister space...

- draw a card from the Dumpmeister stack
- follow the instructions on the card
- replace the card at the bottom of the stack.

If you pick the same type of Trash card that you have already played, you can give the same answer again.

You will find some of Mom's Meatloaf cards in the Trash card stack. Mom's Meatloaf is not reusable, recyclable, or compostable. You can only use this card to get out of the dump. You can give Mom's Meatloaf to another player if you draw the Dumpmeister card that tells you to give 2 cards to any player you choose.

EXTRA STUFF

There are a number of correct answers for any Trash card. Just as in real life, you have to think...

How can I reuse this?
How can I recycle this?
How can I compost this?

The 10 blank cards are for making your own Trash cards to add to the stack. Make sure you have approximately the same number of Reuse, Recycle, and Compost cards.

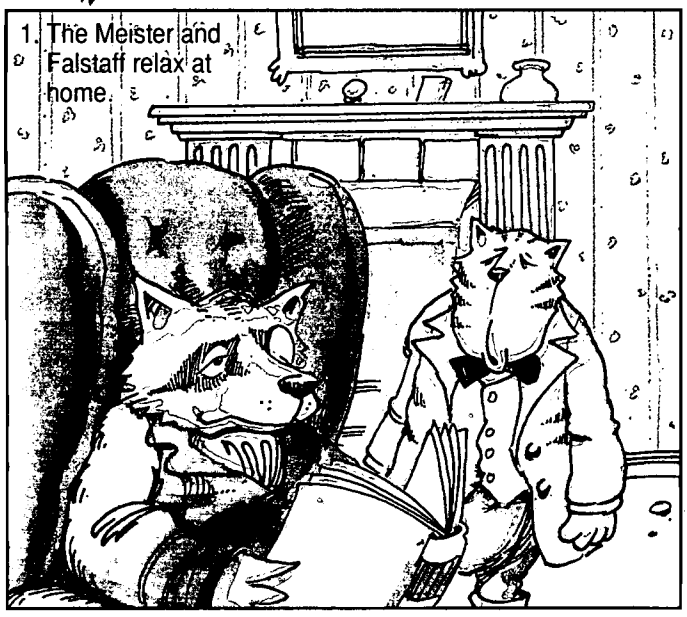
RECYCLE TEAM™

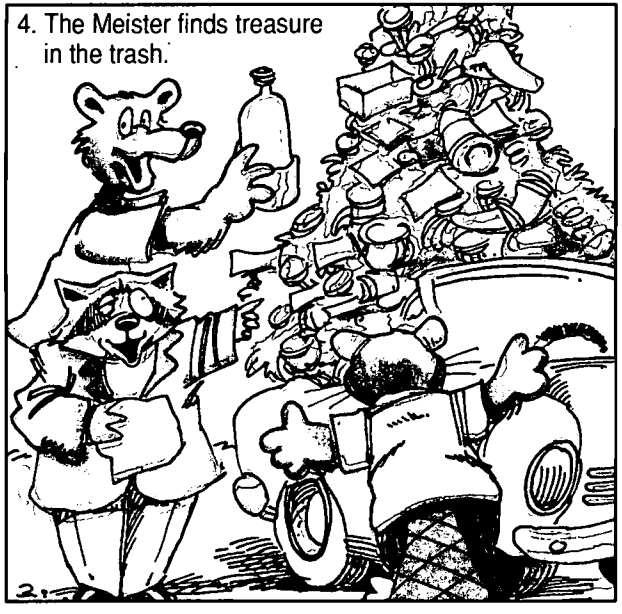
Waste Reduction and Recycling Education Program

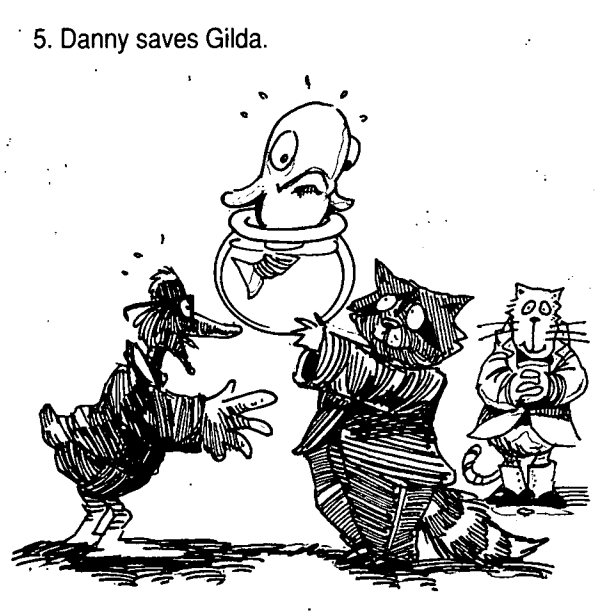
BURIED TREASURE!

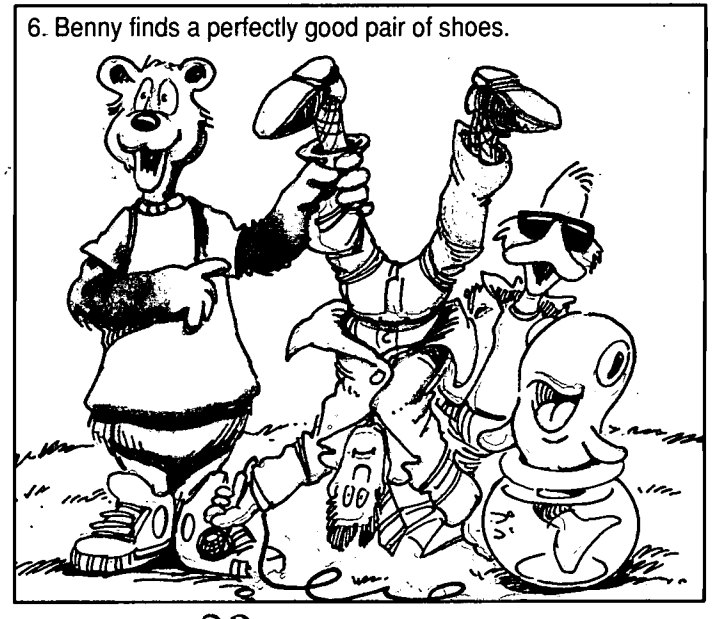
FALSTAFF

MEISTER







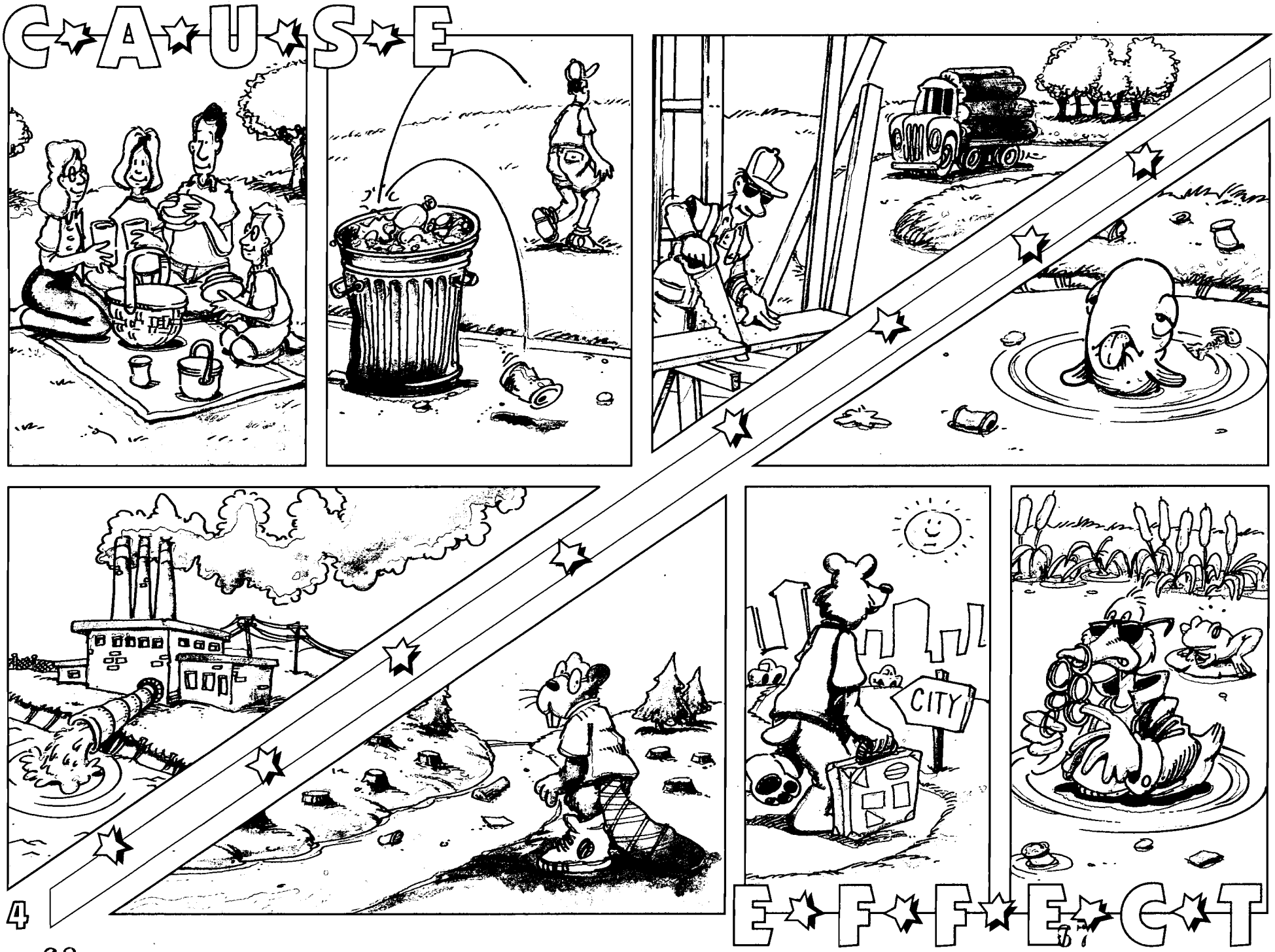


7. Sammy races to the studio.

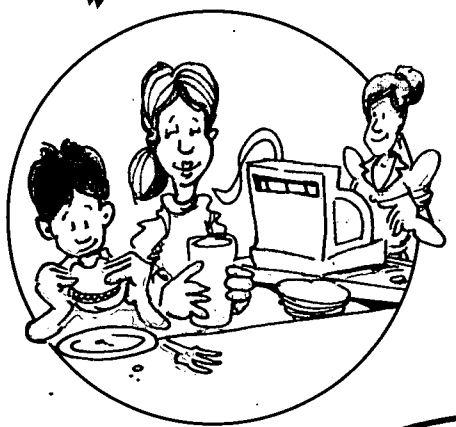
8. Presenting...
The Recycle Team.

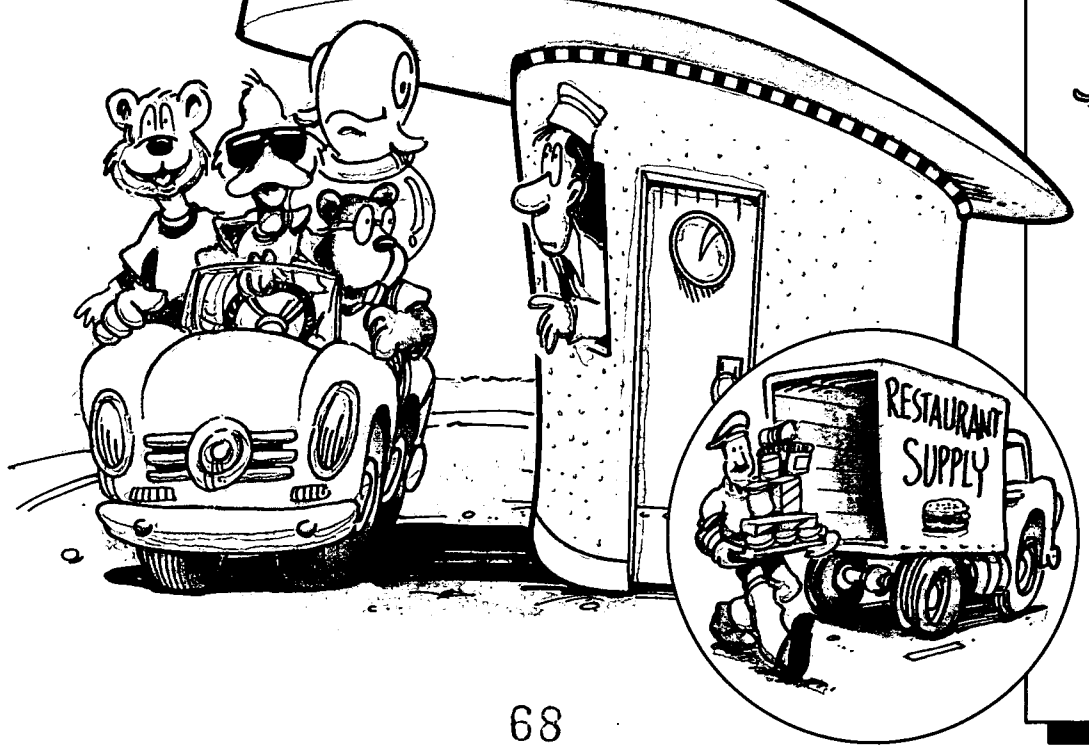
10. A ticker tape parade for the homegrown heroes.

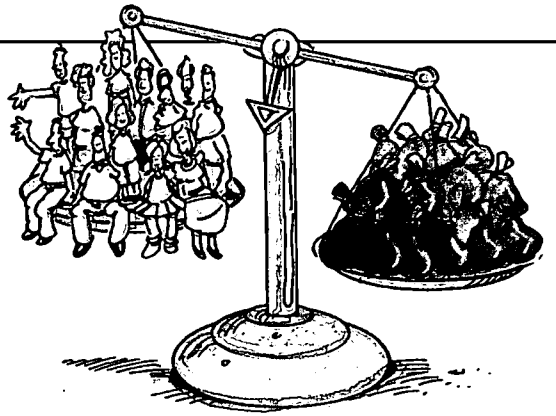
9. So have a clue, and help the earth! Now don't you be a chump!
If you know it can be used again, don't send it to the dump!


C·A·U·S·E
4
CITY
E·F·F·E·C·T

TRASH TO GO







FALSTAFF'S FAMILY FACTS

Each day the average American generates more than 3 lbs. of household trash.

ONE PERSON	
ONE DAY	3 LBS.
ONE WEEK	21 LBS.
ONE MONTH	93 LBS.
ONE YEAR	1095 LBS.

To find how much trash your family generates, put the number of family members (including you) in the yellow box and multiply across.

NUMBER OF PEOPLE IN YOUR FAMILY

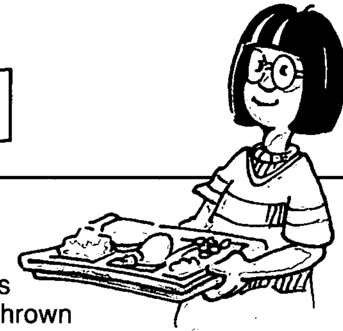
x 3 = _____ LBS. IN ONE DAY

x 21 = _____ LBS. IN ONE WEEK

x 93 = _____ LBS. IN ONE MONTH

x 1095 = _____ LBS. IN ONE YEAR

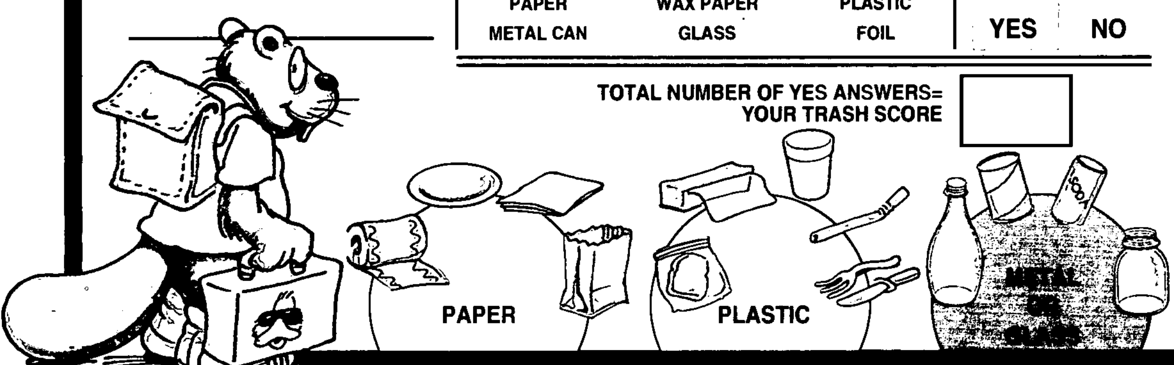
LET'S DO LUNCH

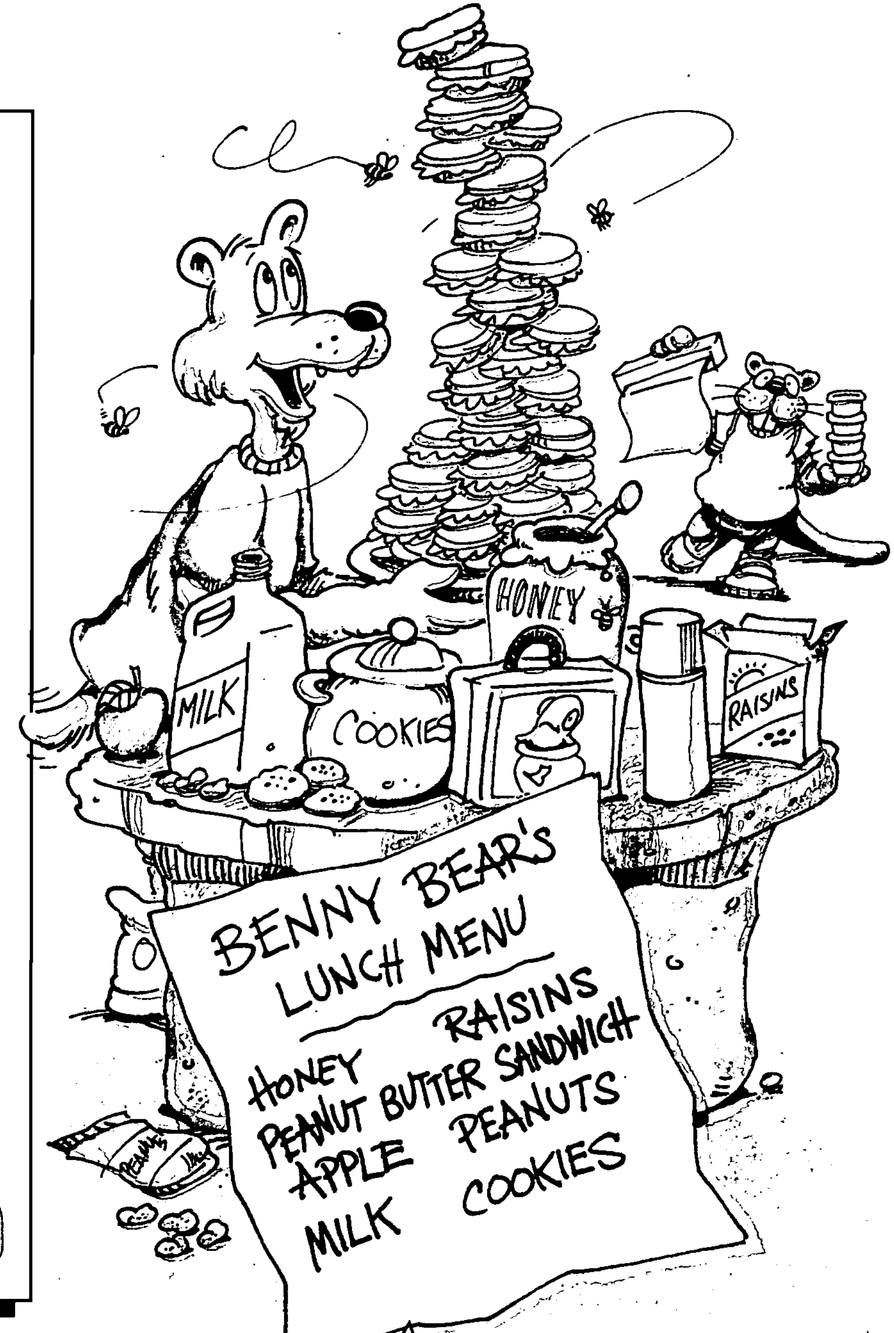


LUNCH TRASH SURVEY: List all of the items in your lunch and circle the type of packaging material used for each item. Don't forget to list lunch bags, napkins, utensils and drink containers. Circle YES if the packaging will be thrown away. Then add your YES answers to get YOUR TRASH SCORE.

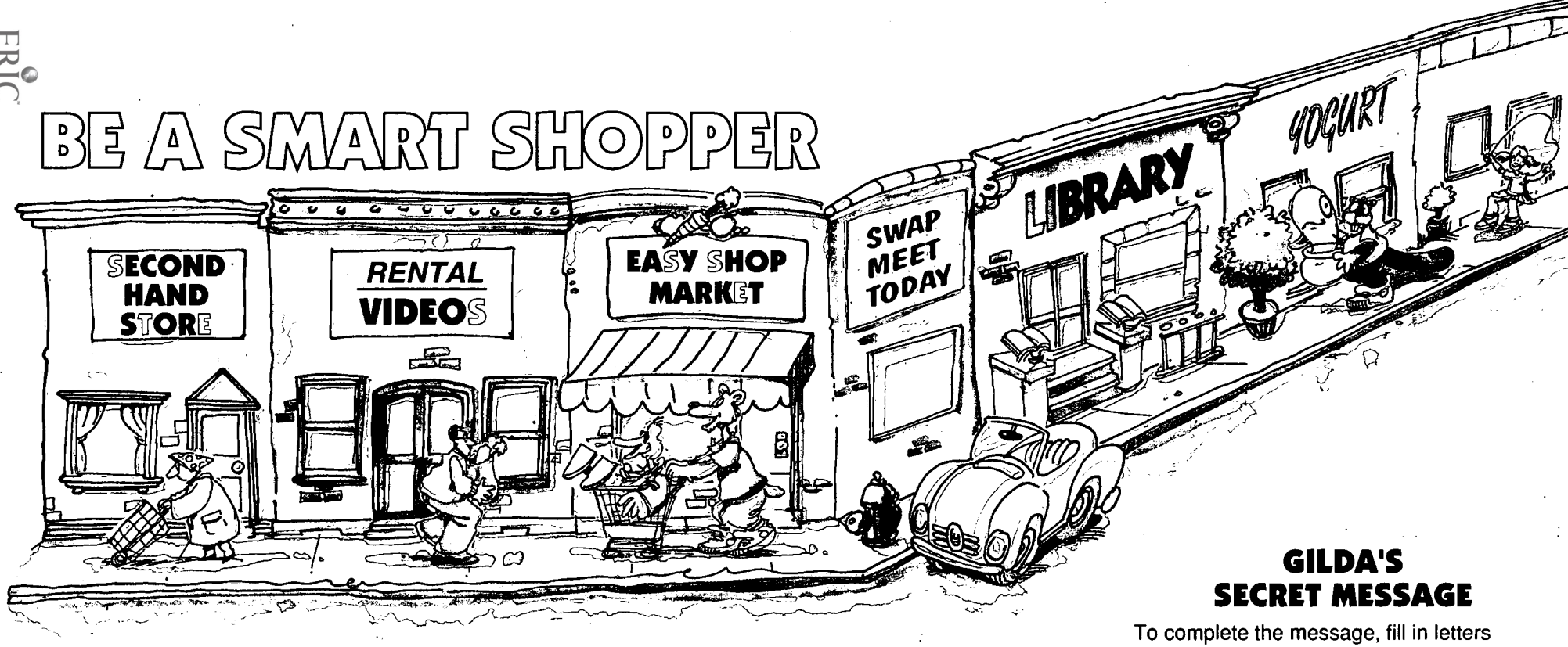
Write your lunch items here.	Circle how each item is wrapped or served.			Will it be thrown away?	
________	PAPER METAL CAN	WAX PAPER GLASS	PLASTIC FOIL	YES	NO
________	PAPER METAL CAN	WAX PAPER GLASS	PLASTIC FOIL	YES	NO
________	PAPER METAL CAN	WAX PAPER GLASS	PLASTIC FOIL	YES	NO
________	PAPER METAL CAN	WAX PAPER GLASS	PLASTIC FOIL	YES	NO
________	PAPER METAL CAN	WAX PAPER GLASS	PLASTIC FOIL	YES	NO
________	PAPER METAL CAN	WAX PAPER GLASS	PLASTIC FOIL	YES	NO
________	PAPER METAL CAN	WAX PAPER GLASS	PLASTIC FOIL	YES	NO
________	PAPER METAL CAN	WAX PAPER GLASS	PLASTIC FOIL	YES	NO
________	PAPER METAL CAN	WAX PAPER GLASS	PLASTIC FOIL	YES	NO

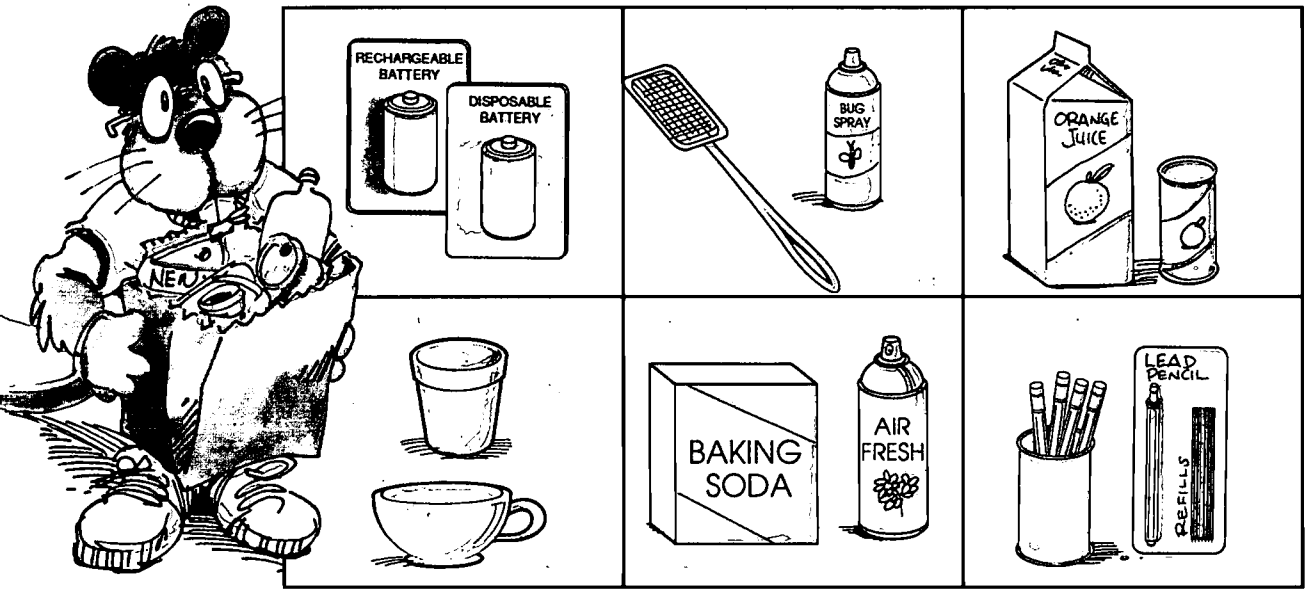
TOTAL NUMBER OF YES ANSWERS= YOUR TRASH SCORE [ ]





BE A SMART SHOPPER





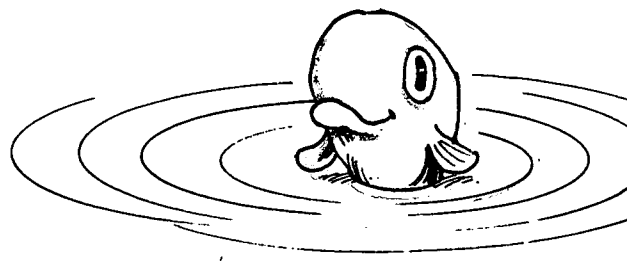
GILDA'S SECRET MESSAGE

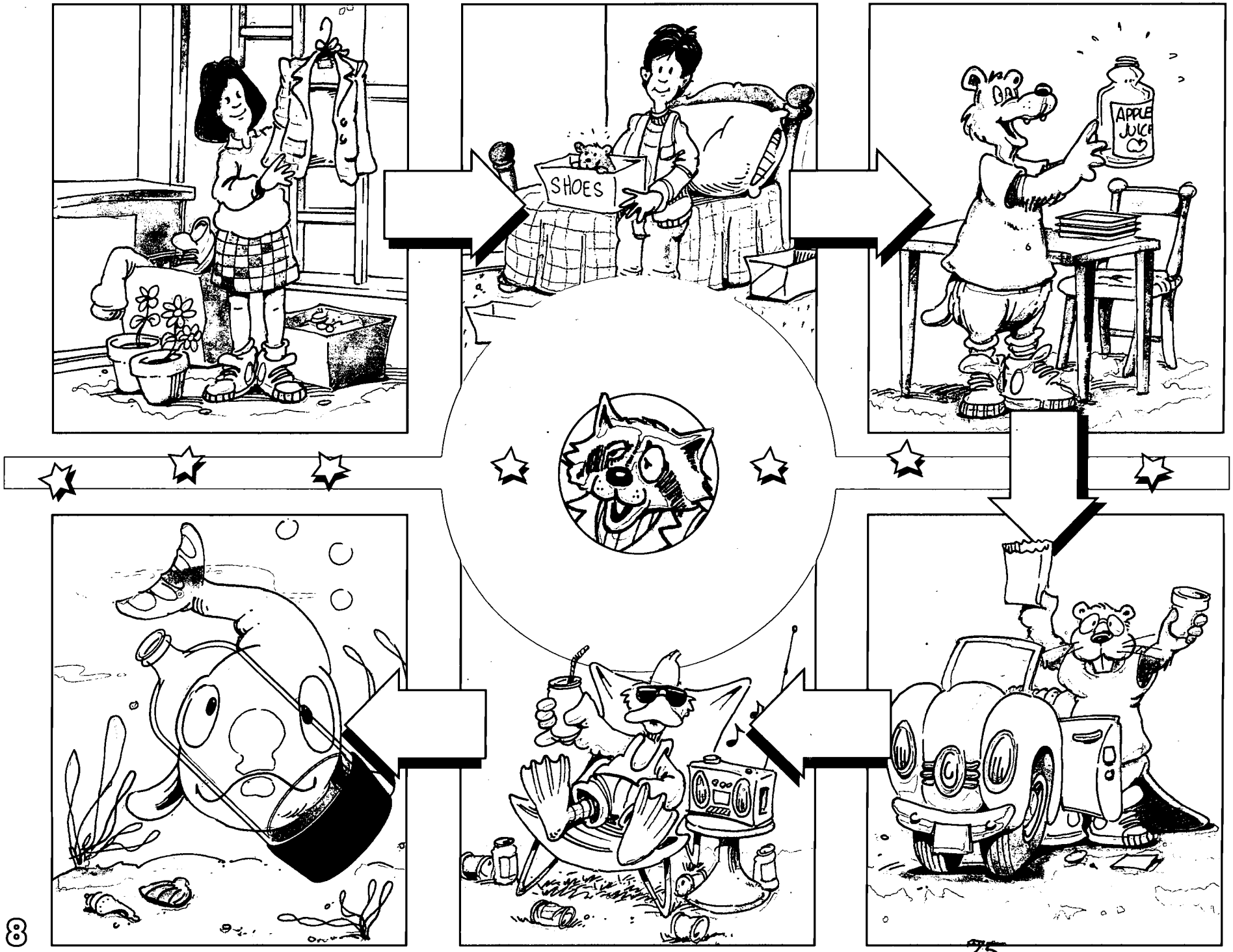
To complete the message, fill in letters of the same color as the first letter in each word below. You'll find the letters in the three store names above.

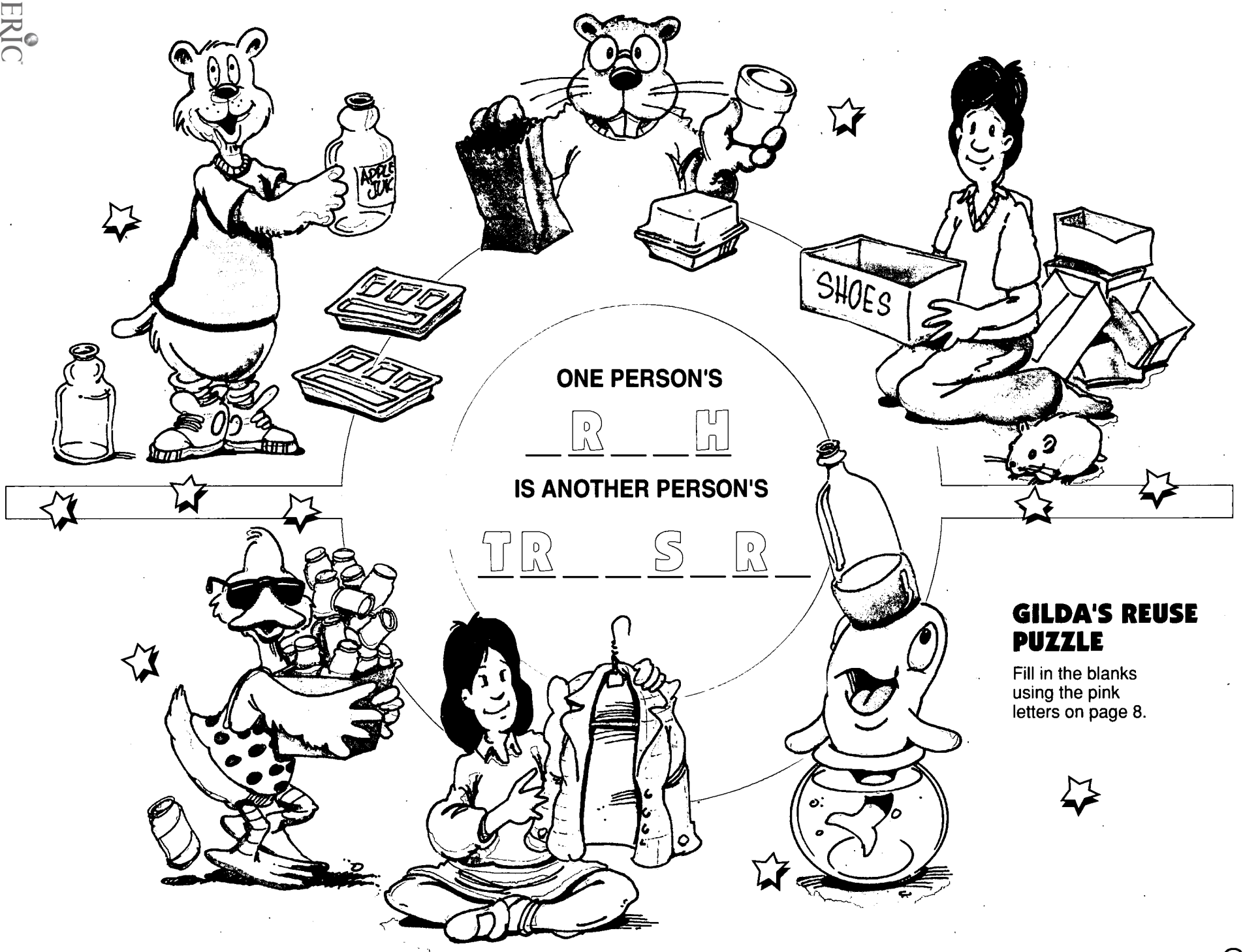
WHEN YOU'RE A SMART SHOPPER...

L ___ ___ ___ ___

I ___ ___ B ___ ___ ___ ___



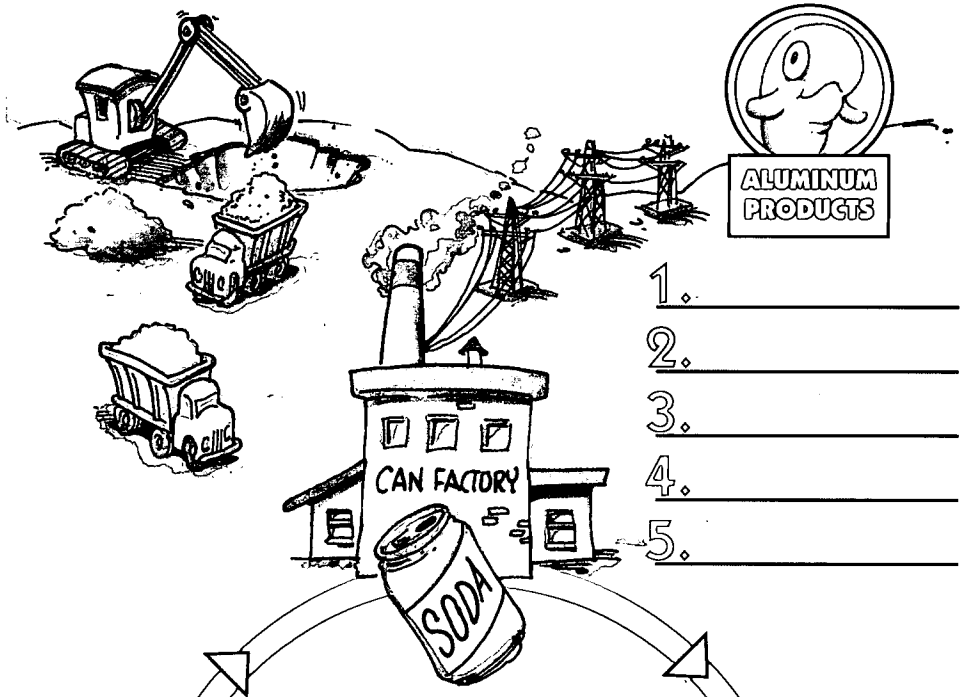

SHOES
APPLE JUICE



GILDA'S REUSE PUZZLE

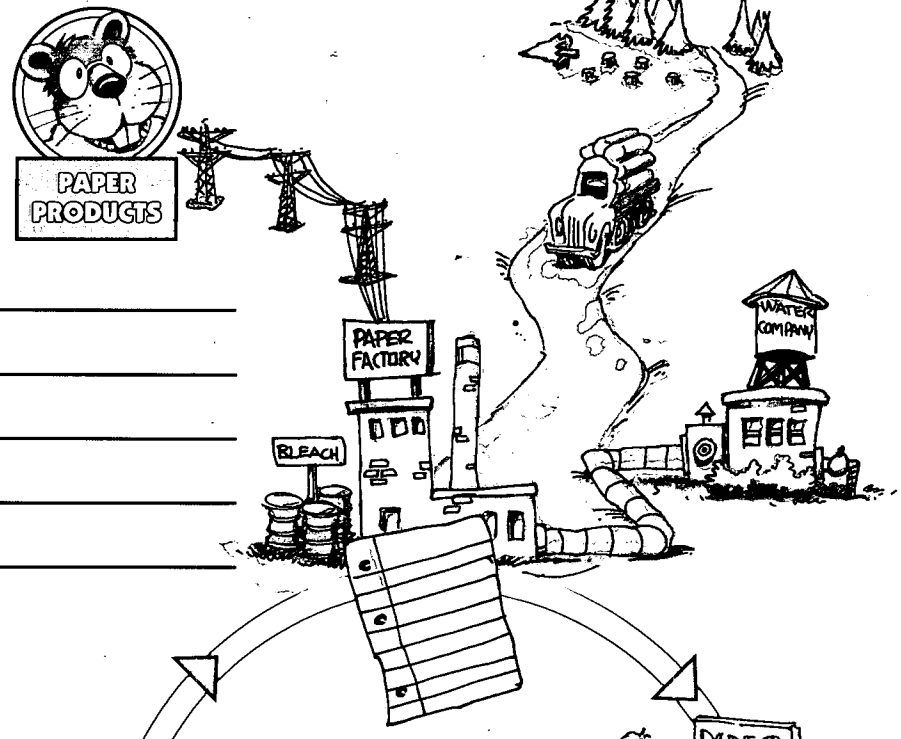
Fill in the blanks using the pink letters on page 8.

CLOSE THE LOOP!

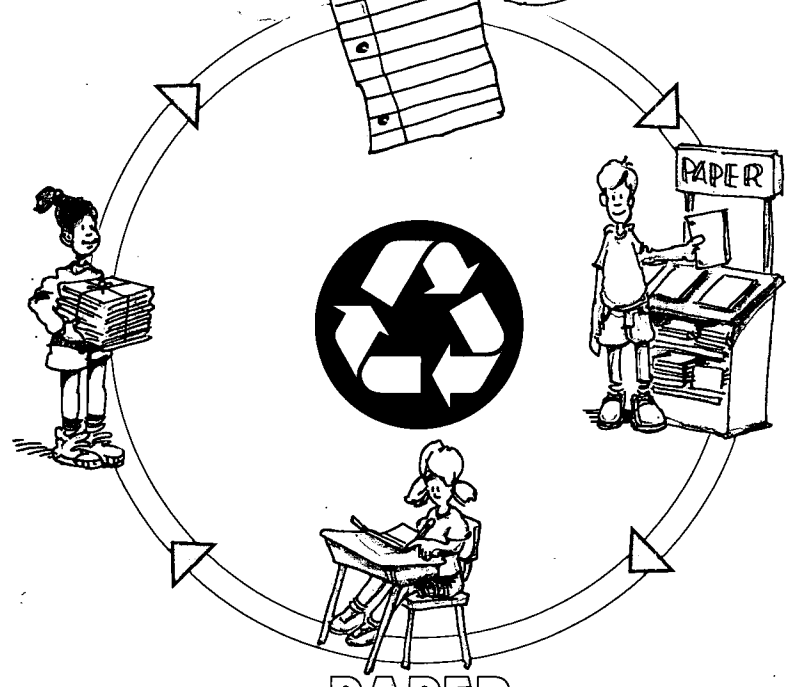


1. _____
2. _____
3. _____
4. _____
5. _____

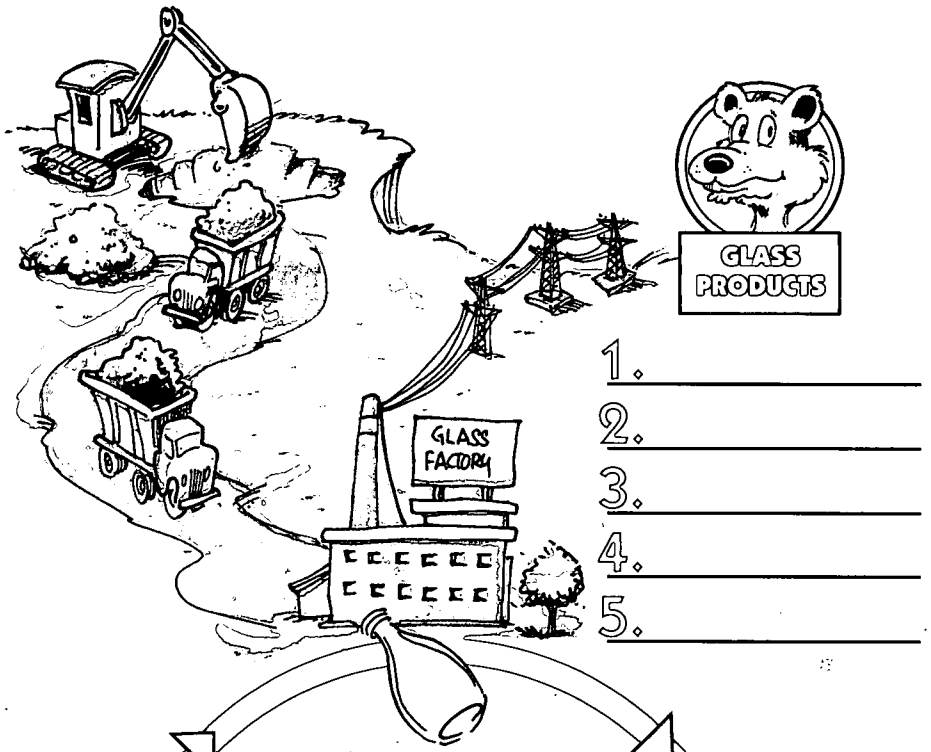
ALUMINUM



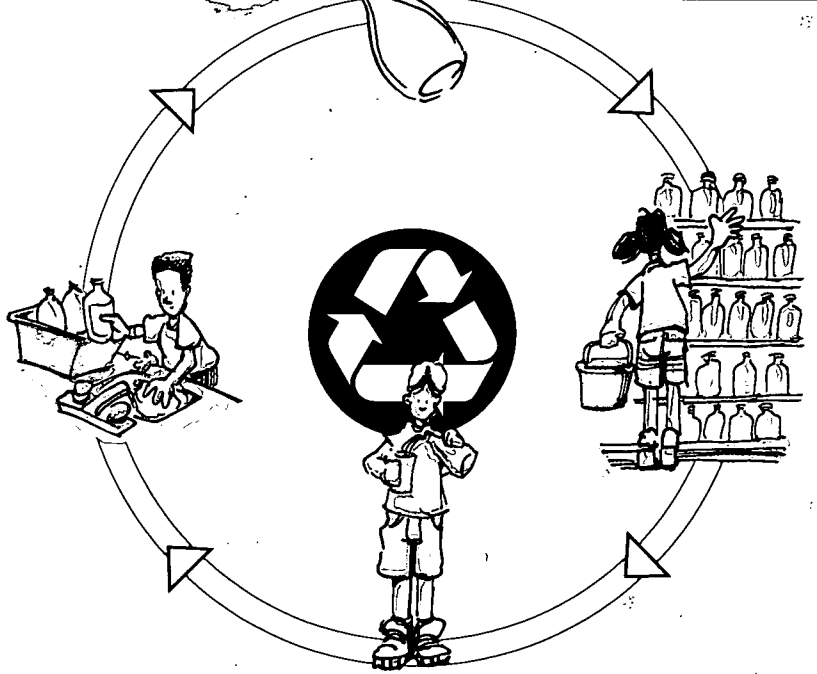
1. _____
2. _____
3. _____
4. _____
5. _____



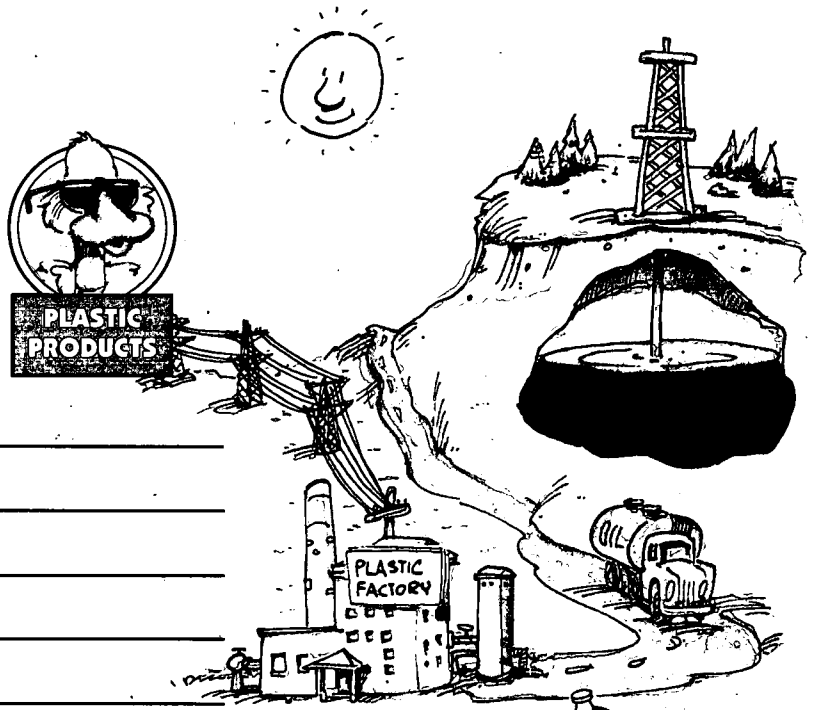
PAPER



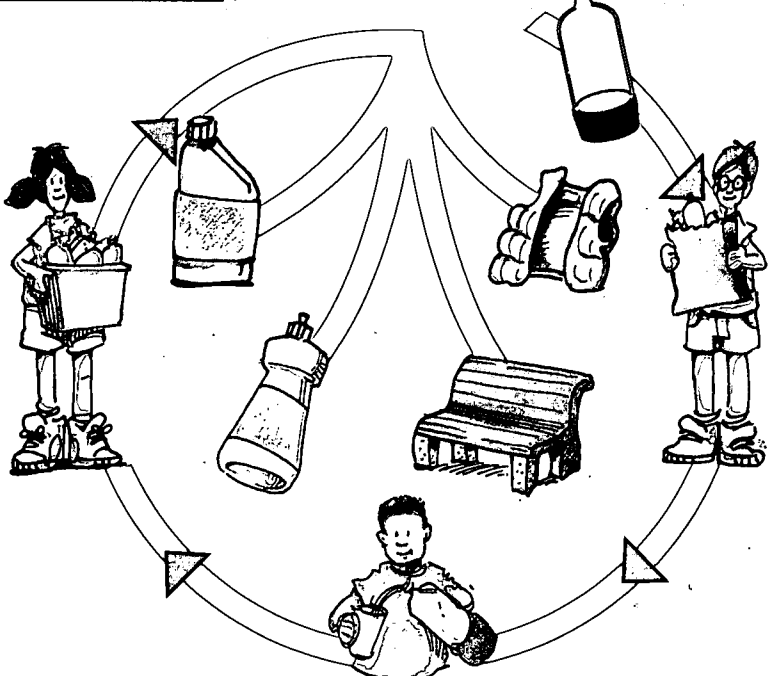
1. _____
2. _____
3. _____
4. _____
5. _____



GLASS

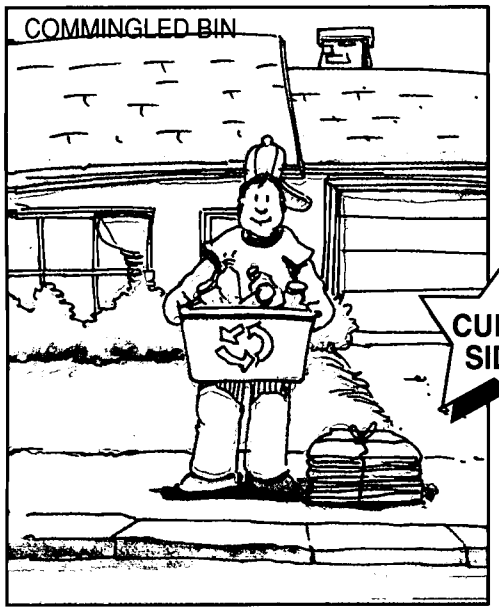


1. _____
2. _____
3. _____
4. _____
5. _____

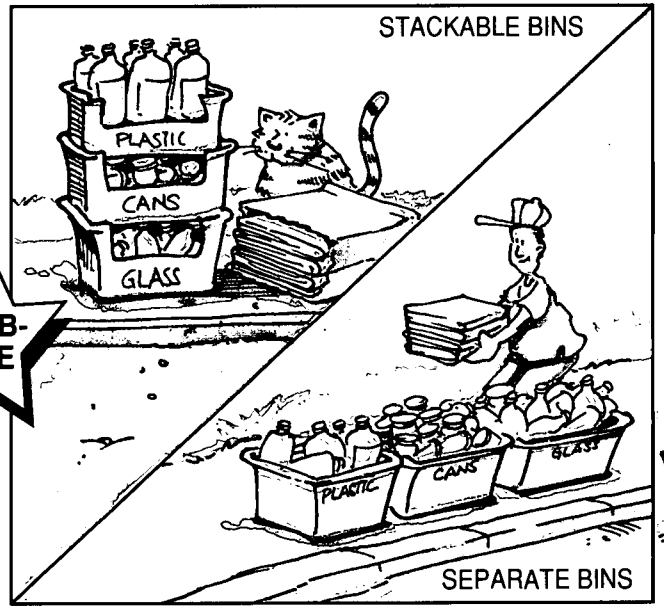


PLASTIC

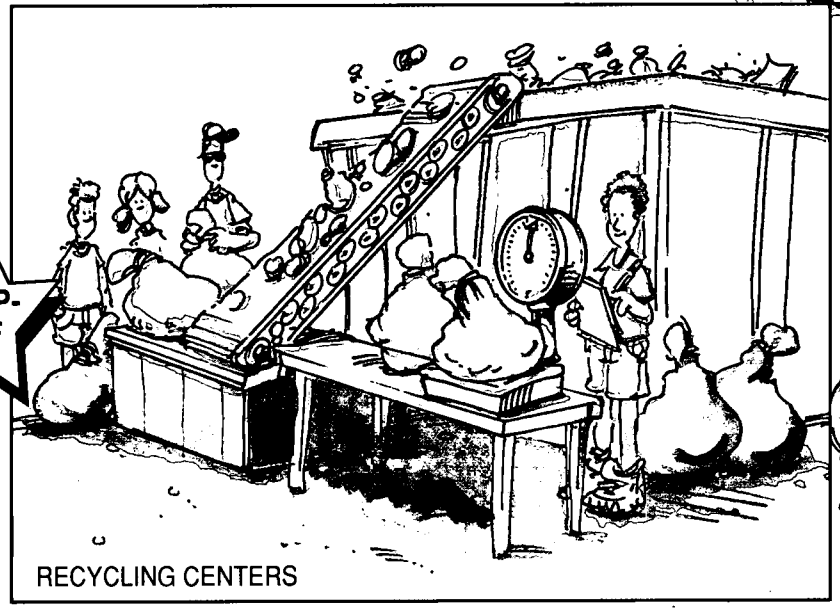
CURB 'EM OR DROP 'EM!



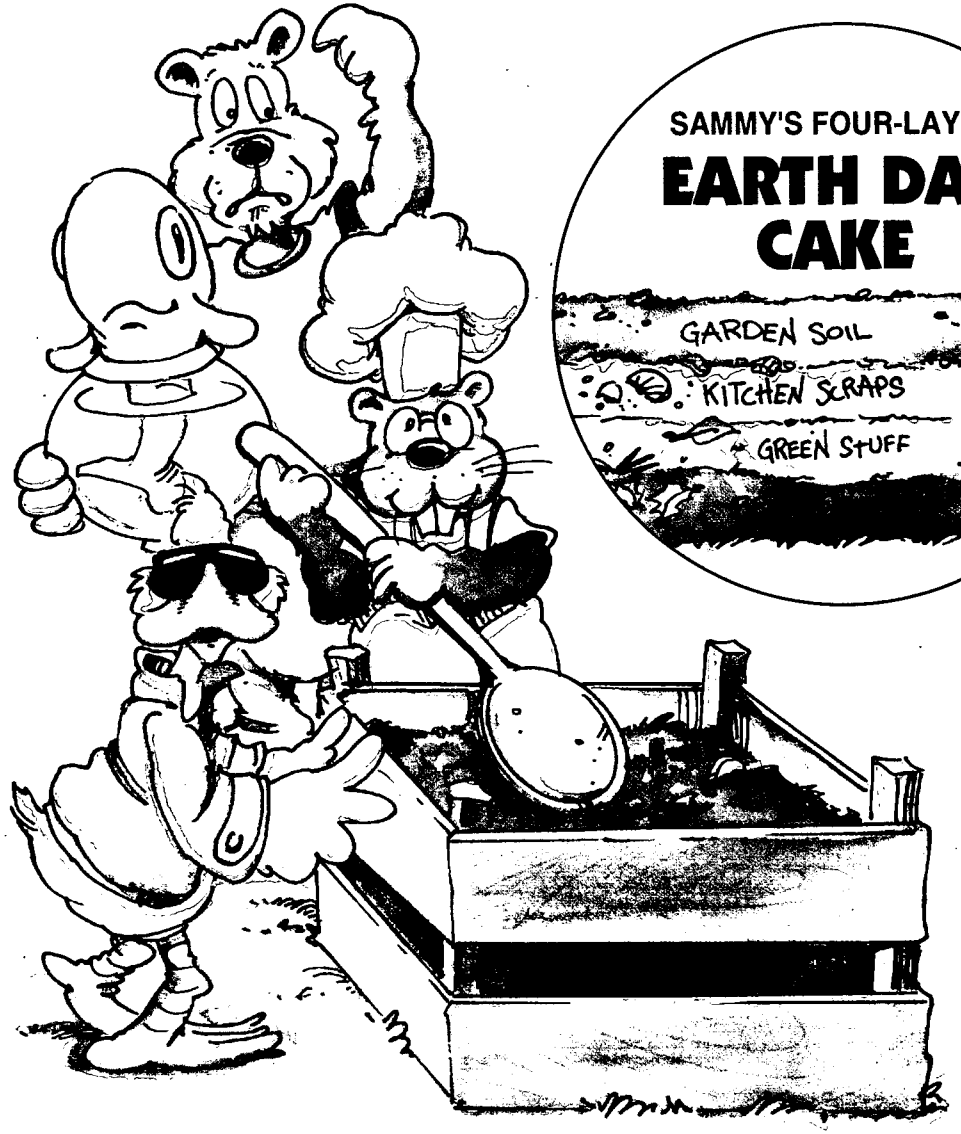
CURB-SIDE

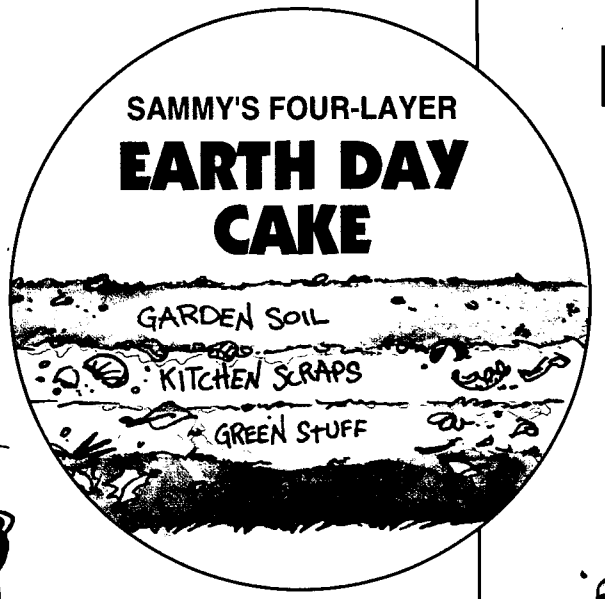


DROP-OFF



HAPPY EARTH DAY TO YOU!





RECIPE

EARTH DAY CAKE

INGREDIENTS:

BROWN STUFF
Provides carbon and absorbs moisture. Includes leaves, stems, straw, wood chips, sawdust, and twigs.

GREEN STUFF
Provides nitrogen. Includes fresh grass clippings and fresh leaves.

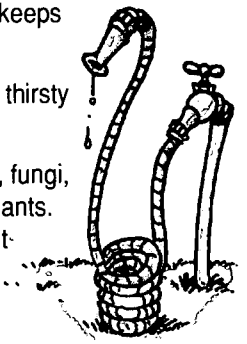
KITCHEN SCRAPS
Adds nutrients back into the pile. Includes lettuce, carrot tops, apple cores, celery, eggshells, and coffee grounds.

OTHER STUFF

AIR: Helps living things breathe and keeps the pile smelling pleasant.

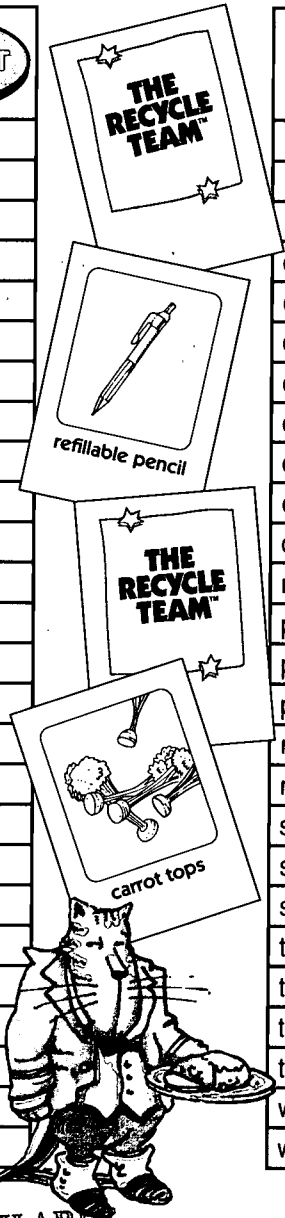
WATER: Creates a friendly home for thirsty earthworms and insects.

GARDEN SOIL: Contains bacteria, fungi, microbes, molds, insects, worms, and ants. These organisms break down the plant waste by eating it.

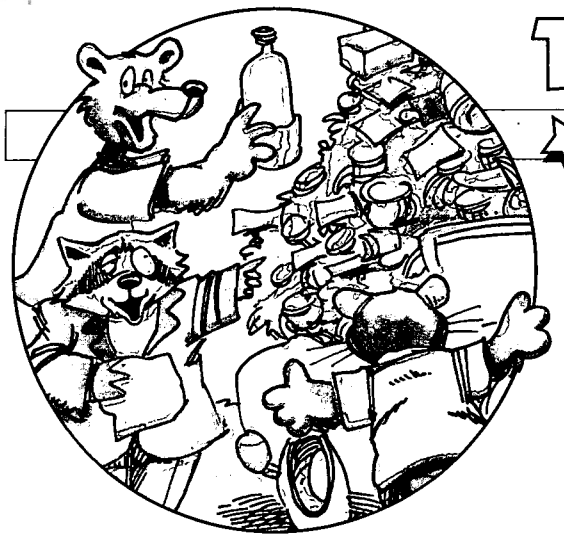


MAKE YOUR OWN RECYCLOPEDIA

TRASH CARD	RECYCLE	REUSE	HOW?	COMPOST
aluminum foil				
apple core				
banana peels				
book				
bows & wrappings				
can of paint				
cardboard box				
carrot tops				
Christmas tree				
cloth bag				
cloth diaper				
coffee can				
coffee grounds				
cola can				
computer paper				
corn cob				
dead flowers				
eggshells				
glass juice bottle				
glass soda bottle				
grass clippings				
junk mail				
leaves				
lunch bag (paper)				
magazines				
margarine tub				



TRASH CARD	RECYCLE	REUSE	HOW?	COMPOST
motor oil				
mug				
newspapers				
oatmeal container				
old celery				
old paint				
old toothbrush				
orange peels				
outgrown shoes				
outgrown sweater				
outgrown toy(roller skates)				
notebook paper				
phone book				
plastic soda bottle				
potato peels				
rechargeable batteries				
refillable pencil				
sawdust				
soup can				
sponge				
thermos				
tires				
towel				
twigs				
water bottle				
watermelon rinds				



TRASHOLOGIST SURVEY

TRASH-OL-O-GIST:

A person who studies trash and knows how to manage waste properly. ("ologist" at the end of the word means "a person who studies.")

A good trashologist is ready to tackle these statements.

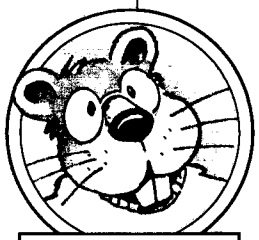
How good a trashologist are you?

Circle YES or NO.

1. I look for ways to keep useful items from being thrown away. **YES** **NO**
2. I throw out trash anywhere because someone else will clean it up for me. **YES** **NO**
3. The only thing to do with trash is to burn it. **YES** **NO**
4. I buy things wrapped in several layers of paper or plastic to get my money's worth. **YES** **NO**
5. I try to reuse things before throwing them away. **YES** **NO**
6. I recycle to help save our natural resources. **YES** **NO**
7. It's important to buy things made from recycled materials. **YES** **NO**
8. Grass clippings can be added to a compost pile. **YES** **NO**
9. I can make a difference in helping to protect our environment. **YES** **NO**

RECYCLE TEAM™ MEMBER

BENNY
THINKS YOU'RE
THE BEST!



SAMMY
THINKS YOU'RE
SUPER!

THIS CERTIFIES THAT

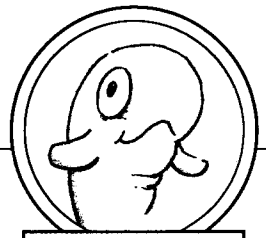
_____

IS AN OFFICIAL MEMBER OF

THE RECYCLE TEAM™

R. Raccoon, The Dumpmeister

DANNY
THINKS YOU'RE
DYNAMITE!



GILDA
THINKS YOU'RE
GREAT!

PRINTED ON RECYCLED PAPER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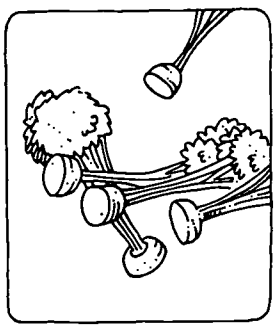
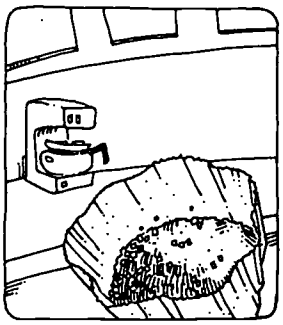
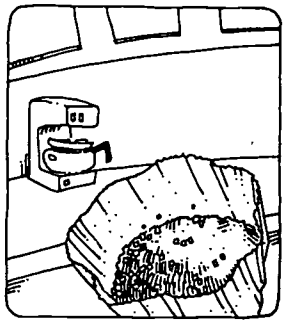


carrot tops

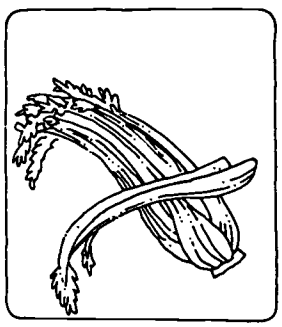


coffee grounds

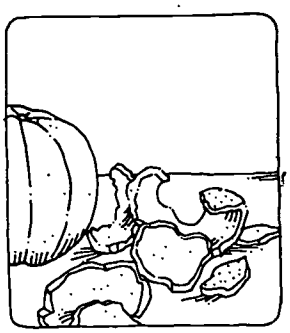


coffee grounds

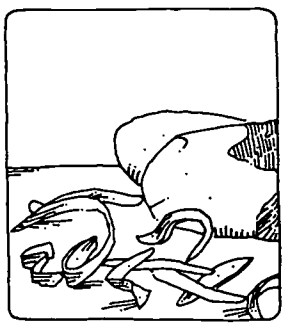
corn cob



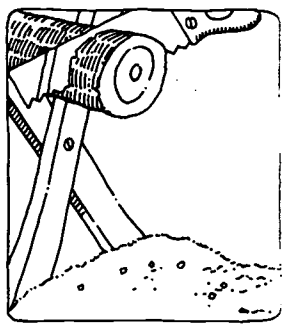
old celery



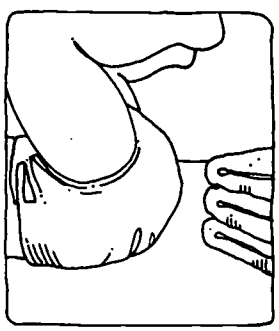
orange peels



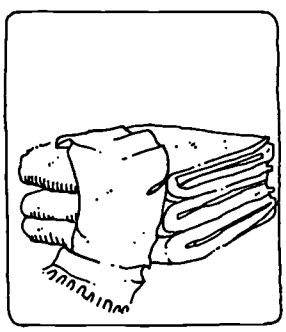
potato peels



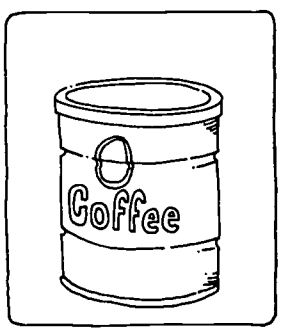
sawdust



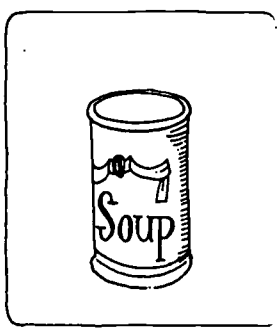
cloth diapers



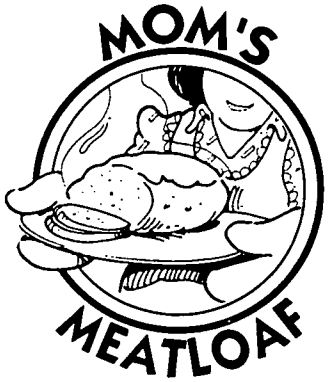
towel

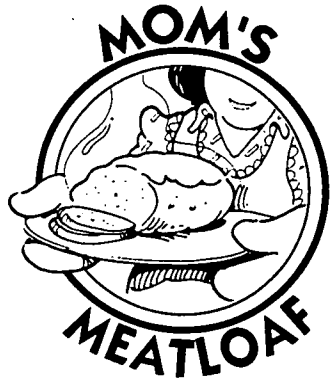


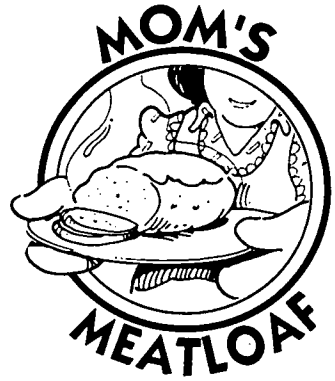
coffee can

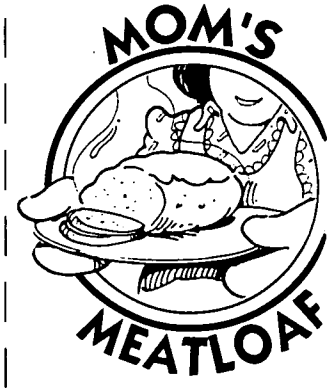


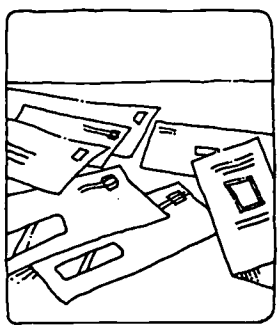
soup can



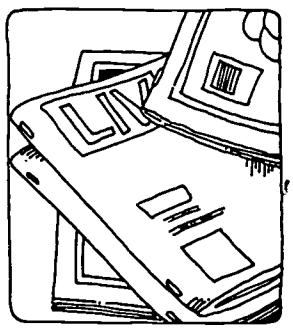




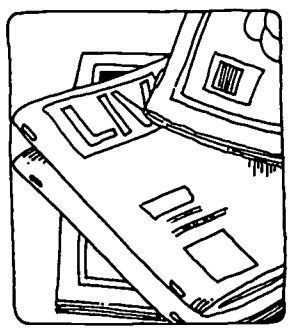




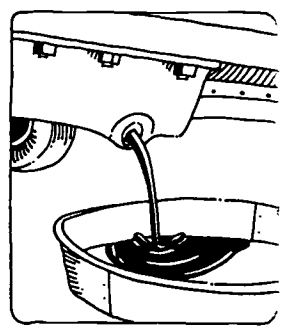
junk mail



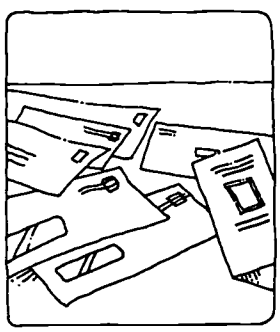
magazines



magazines



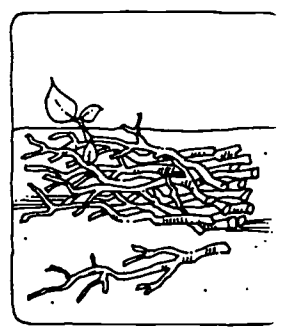
motor oil



junk mail

plastic soda bottle

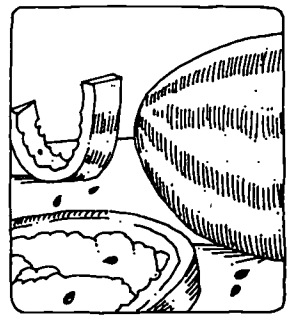
plastic soda bottle



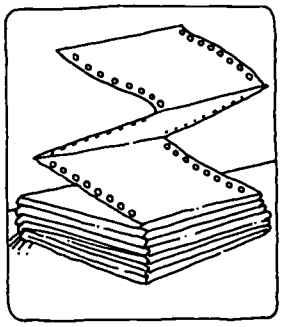
twigs

christmas tree

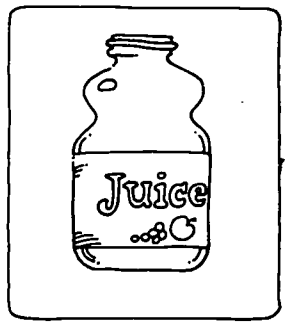
christmas tree



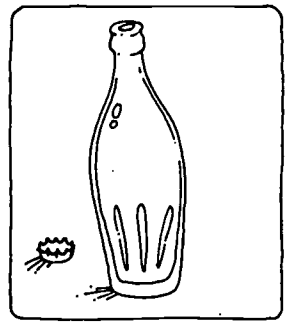
watermelon rinds



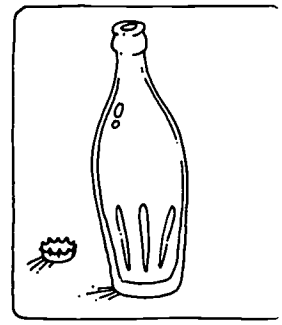
computer paper



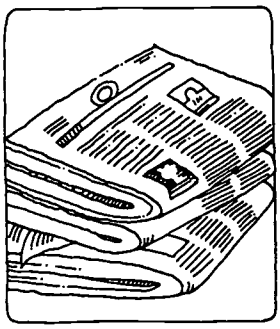
glass juice bottle



glass soda bottle

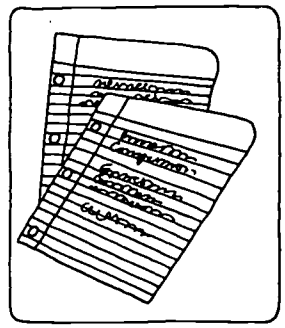


glass soda bottle

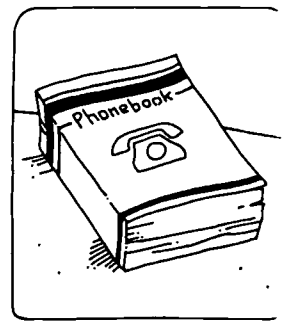


newspapers

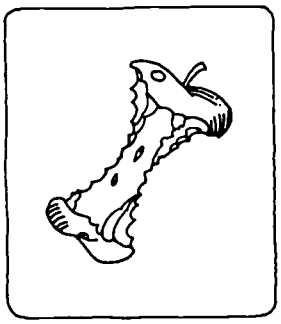
old paint



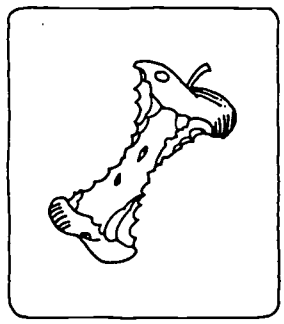
paper



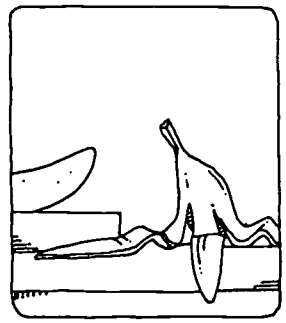
phone book



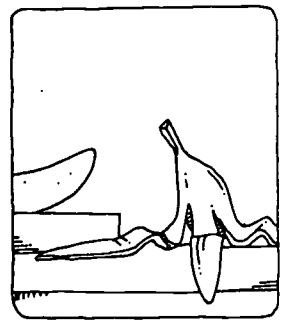
apple core



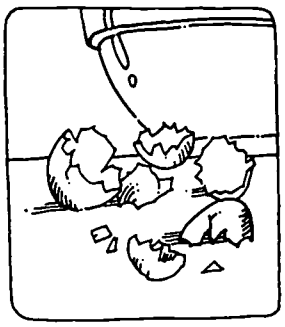
apple core



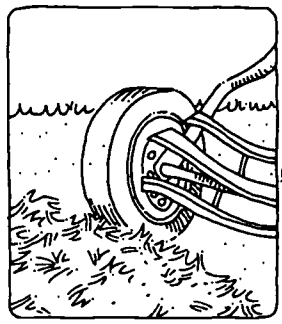
banana peels



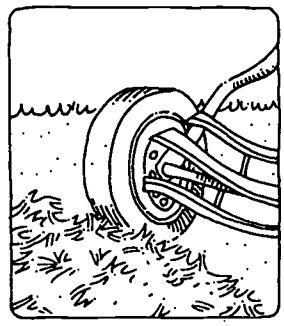
banana peels



eggshells

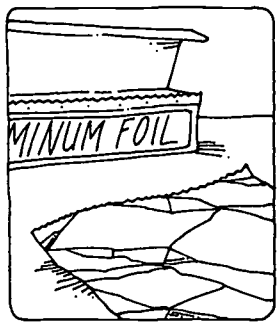


grass clippings



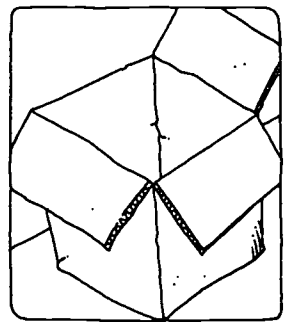
grass clippings

leaves

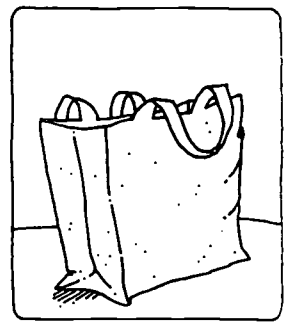


aluminum foil

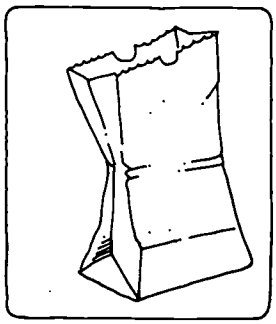
bows & wrappings



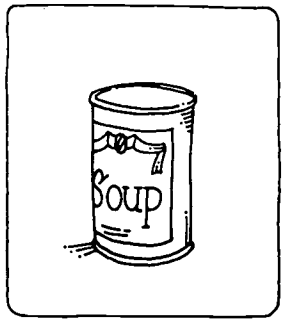
cardboard box



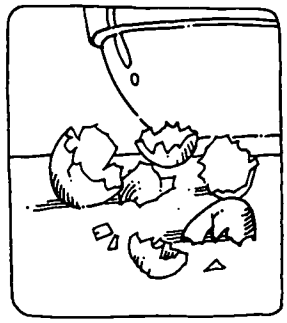
cloth bag



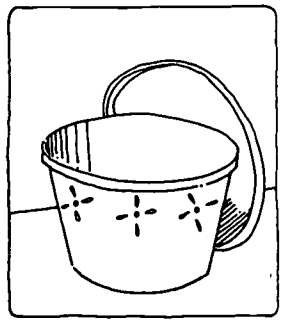
lunch bag



soup can

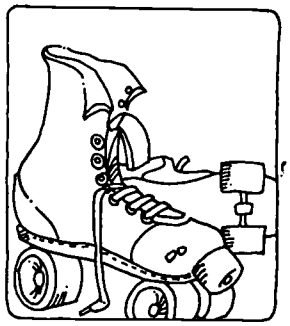


eggshells

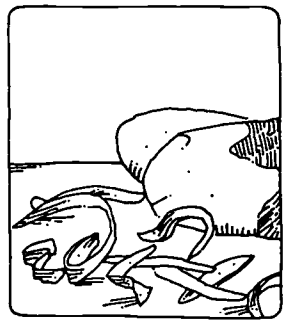


margarine tub

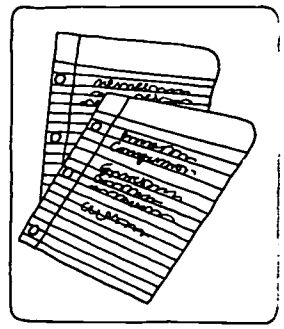
leaves



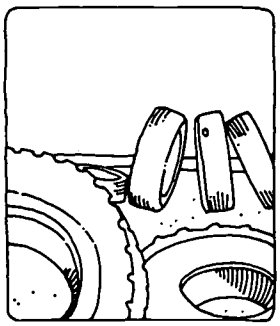
outgrown toy



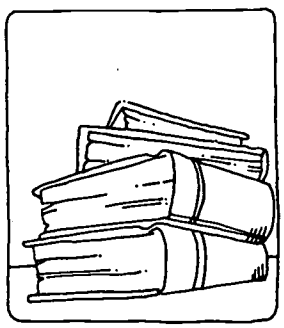
potato peels



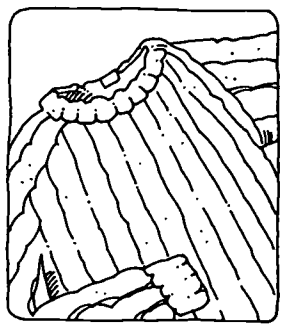
paper



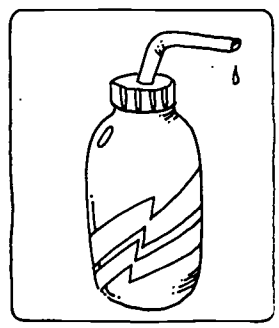
tires



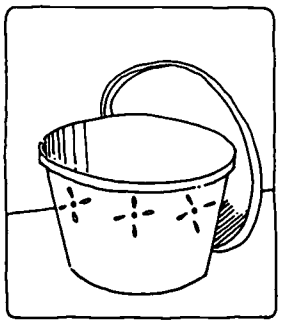
books



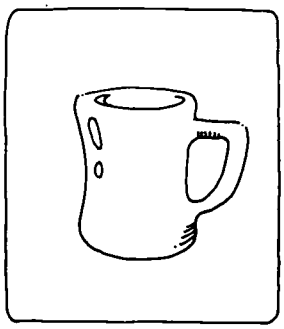
sweater



water bottle

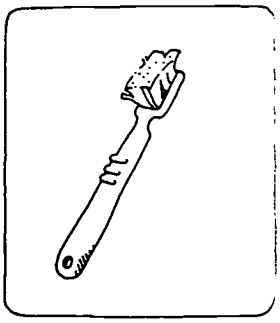


margarine tub

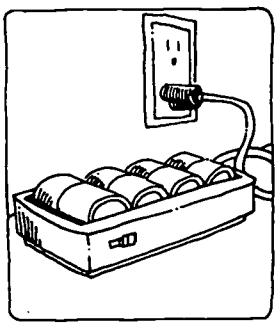


mug

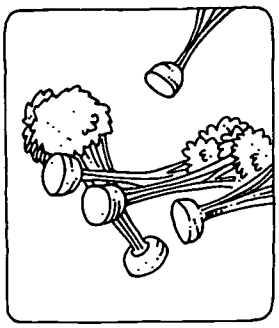
old paint



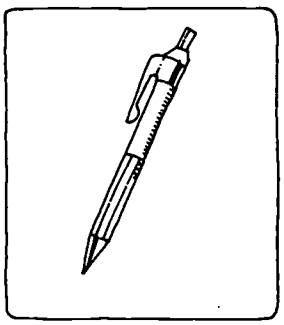
old toothbrush



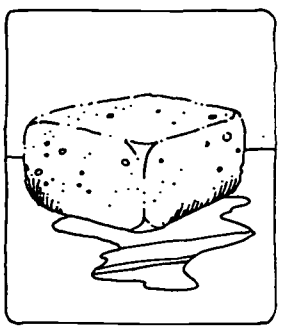
rechargable batteries



carrot tops



refillable pencil

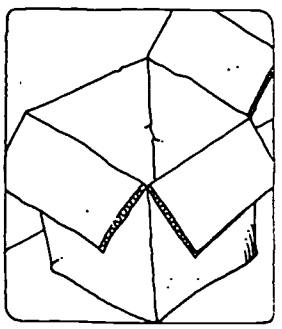


sponge

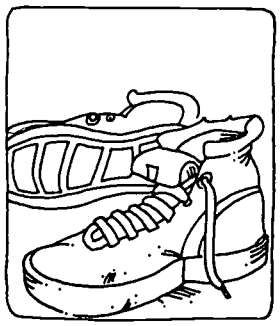
cola can

cola can

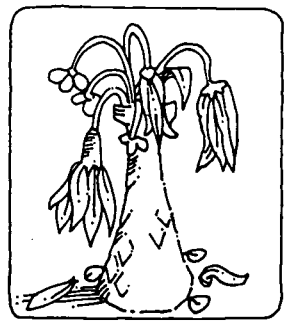
cola can



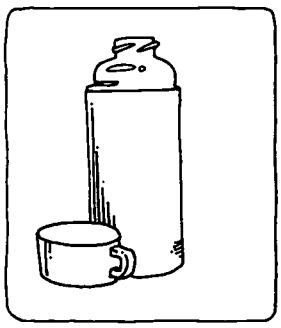
cardboard box



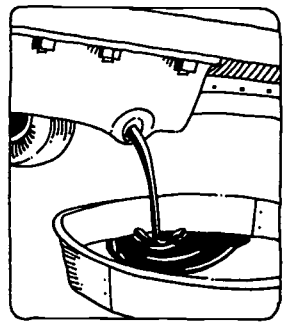
outgrown shoes



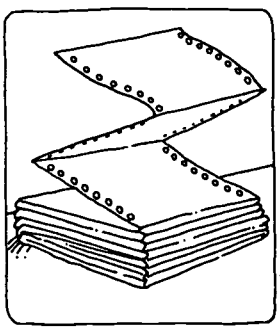
dead flowers



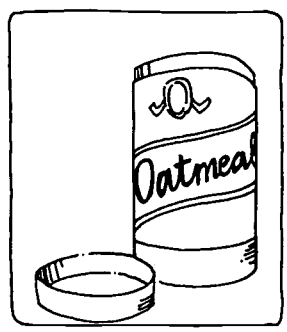
thermos



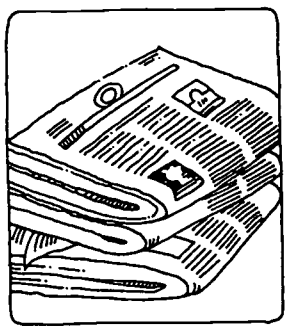
motor oil



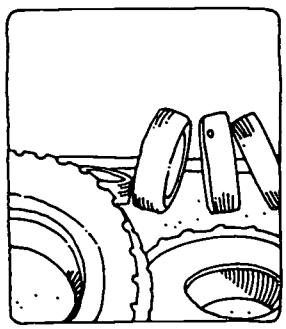
computer paper



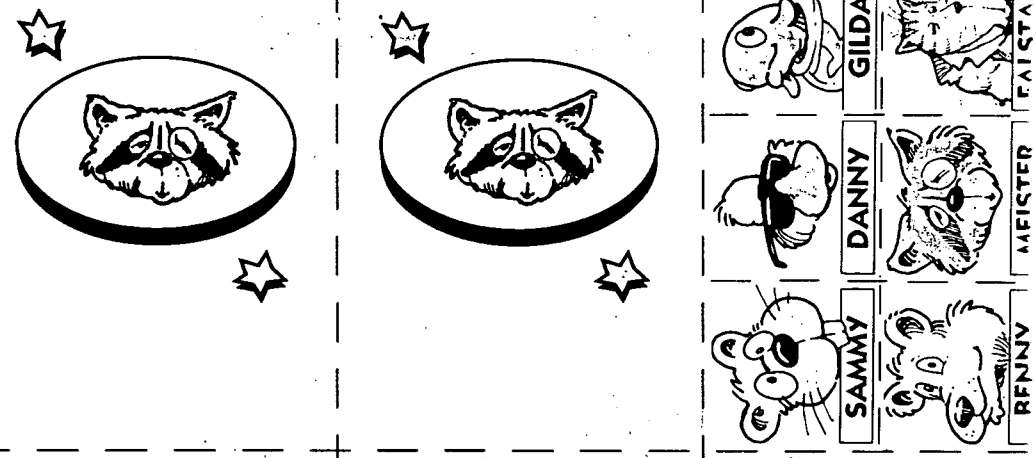
oatmeal container

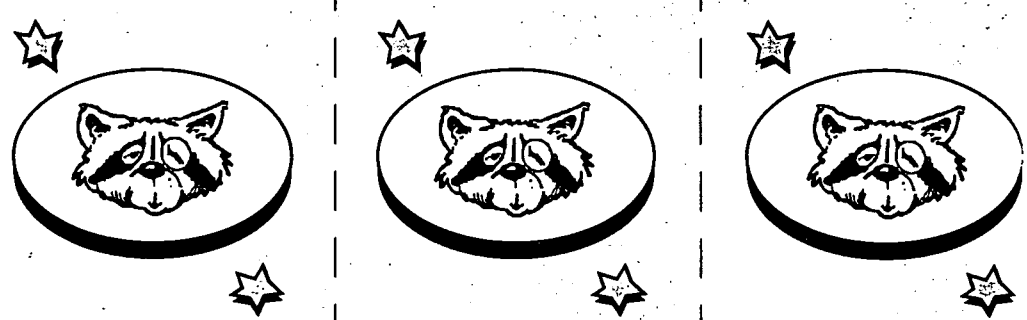


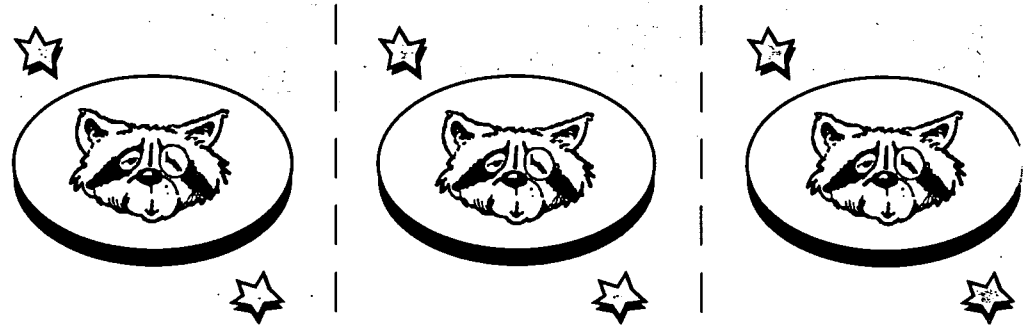
newspapers



tires







ROLL DICE

AND DRAW
THAT NUMBER
OF CARDS
AND LET THE NEXT
PERSON PLAY.

PLAYER
OF YOUR
CHOICE
DRAW 2
CARDS
TAKE ANOTHER TURN

GIVE 1
CARD TO
THE PLAYER
OF YOUR
CHOICE
AND LET THE NEXT
PERSON PLAY

ROLL DICE

AND DRAW
THAT NUMBER
OF CARDS
AND LET THE NEXT
PERSON PLAY.

PLAYER
OF YOUR
CHOICE
DRAW 2
CARDS
TAKE ANOTHER TURN

GIVE 1
CARD TO
THE PLAYER
OF YOUR
CHOICE
AND LET THE NEXT
PERSON PLAY

ROLL DICE

AND DRAW
THAT NUMBER
OF CARDS
AND LET THE NEXT
PERSON PLAY.

PLAYER
OF YOUR
CHOICE
DRAW 2
CARDS
TAKE ANOTHER TURN

GIVE 1
CARD TO
THE PLAYER
OF YOUR
CHOICE
AND LET THE NEXT
PERSON PLAY

ROLL DICE

AND DRAW
THAT NUMBER
OF CARDS
AND LET THE NEXT
PERSON PLAY.

PLAYER
OF YOUR
CHOICE
DRAW 2
CARDS
TAKE ANOTHER TURN

GIVE 1 CARD TO THE PLAYER OF YOUR CHOICE AND LET THE NEXT PERSON PLAY	**ROLL DICE** AND DRAW THAT NUMBER OF CARDS AND LET THE NEXT PERSON PLAY.	**PLAYER OF YOUR CHOICE DRAW 2 CARDS** TAKE ANOTHER TURN
GIVE 1 CARD TO THE PLAYER OF YOUR CHOICE AND LET THE NEXT PERSON PLAY	**GO TO THE DUMP** ROLL 6 OR 1 OR USE MOM'S MEATLOAF TO GET OUT ON YOUR NEXT TURN	**GO TO THE DUMP** ROLL 6 OR 1 OR USE MOM'S MEATLOAF TO GET OUT ON YOUR NEXT TURN
GO TO THE DUMP ROLL 6 OR 1 OR USE MOM'S MEATLOAF TO GET OUT ON YOUR NEXT TURN	**GO TO THE DUMP** ROLL 6 OR 1 OR USE MOM'S MEATLOAF TO GET OUT ON YOUR NEXT TURN	**GO TO THE DUMP** ROLL 6 OR 1 OR USE MOM'S MEATLOAF TO GET OUT ON YOUR NEXT TURN

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement (OERI)
Educational Resources Information Center (ERIC)

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